UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
One Blackburn Drive
Gloucester, MA 01930-2298

SEP 17 2004

Ms. Christine Godfrey
Chief, Regulatory Branch
U.S. Army Corps of Engineers
696 Virginia Road
Concord, Massachusetts 01742-2751

Re: Weavers Cove Energy L.L.C. and Mill River Pipeline L.L.C. (NAE-2004-2355), Fall River, Massachusetts

Dear Ms. Godfrey:

The National Marine Fisheries Service (NOAA Fisheries) has reviewed the Public Notice (#2004-2355) by Weavers Cove Energy L.L.C. and Mill River Pipeline L.L.C. (applicants) for the construction of a Liquefied Natural Gas (LNG) import facility along the Taunton River in Fall River, Massachusetts. The Federal Energy Regulatory Commission (FERC) has issued a Draft Environmental Impact Statement (DEIS) for this project and is currently under review. NOAA Fisheries has served as a cooperating federal agency in the development of the DEIS.

According to the Army Corps of Engineers' (ACOE) Public Notice, the proposed project will conduct dredging within an existing federal navigation channel, install structures, and discharge fill material in wetlands and waterways for the construction of the LNG import terminal and natural gas pipeline facilities. Specifically, the applicant has proposed to dredge approximately 2.5 million cubic yards of material from within a footprint of approximately 200 acres; replace a pier with jetty structure; install sheet pilings to stabilize and straighten approximately 2,650 ft of shoreline; and permanently fill approximately .04 acres of salt marsh habitat, .94 acres of intertidal habitat, and .17 acres of subtidal habitat.

A primary concern to NOAA Fisheries is the proposed dredging. This activity will remove a minimum of approximately 2.5 million cubic yards of material from the channel and turning basin with upland, on-site placement of material. The applicant has proposed the dredging of the Taunton River to occur continuously for a period of 36 months. At this time, NOAA Fisheries believes that the proposed project will result in substantial and unacceptable impacts on aquatic resources of national importance (ARNI).

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) and the Fish and Wildlife Coordination Act require federal agencies to consult with one another on projects such as this. Insofar as a project involves essential fish habitat (EFH), as this project does, this process is guided by the requirements of our EFH regulation at 50 CFR 600.905, which mandates the preparation of EFH assessments and generally outlines each agency's obligations in the relevant consultation procedure. We also note your permitting obligations at 33 CFR Parts 320 through 330, and particularly at 40 CFR Part 230, as well as the process mutually agreed upon in our

Memorandum of Agreement (MOA) concerning Section 404(q) of the Clean Water Act. We offer the following comments and recommendations on this project pursuant to the above referenced regulatory construct and to invoke the elevation process outlined in Part IV, Paragraph 3(b) of our interagency MOA.

General Comments

The Taunton River/Mount Hope Bay Complex has been designated as EFH for 14 federally managed species, including the commercially and recreationally important winter flounder (*Pseudopleuronectes americanus*). The New England Fishery Management Council currently manages winter flounder under the Northeast Multispecies (Groundfish) Fishery Management Plan. As noted within the DEIS, Marine Research, Inc. (MRI) has been conducting annual surveys in Mount Hope Bay and the lower Taunton River in order to determine finfish species and lifestage occurrence associated with the Brayton Point Power Station permit stipulations. These surveys, which include both trawls and seine stations, show that winter flounder have been present within the project footprint during previous surveys in Mount Hope Bay (NEPCo and MRI, 1994, NEPCo and MRI, 1999). MRI's 1992 icthyoplankton sampling in upper Mount Hope Bay found that winter flounder larvae accounted for 94% of the larvae collected between January and April (NEPCo and MRI, 1994). Furthermore, MRI's 1998 sampling indicated that winter flounder represented 67% of the larvae collected from February through mid-May (NEPCo and MRI ,1999). The EFH assessment within the ACOE Joint Section 10/404 Individual Permit Application (permit application) and the DEIS notes that there is presence of winter flounder within the project area, and the species has been identified specifically within the Taunton River (Chris Powell, personal communication, 9/2/04).

The proposed project area serves as an important winter flounder spawning and juvenile development habitat. According to the NOAA Technical Memorandum NMFS-NE-138 (EFH Source Document), winter flounder spawning has been known to occur on substrates of sand, silt, and mud at varying depths of less than 5 meters to depths of 45 meters on Georges Bank (Pereira et al. 1999). Furthermore, winter flounder spawning is temperature dependent and eggs have been collected in water temperatures of 10 degrees Celsius or less (Pereira et al. 1999). According to measurements associated with the Brayton Point Power Station NPDES permit renewal application, intake water temperatures in the Taunton River from 1981–2001 have been variable and the minimum monthly averages range from 0.7 to 1.3 degrees C (US Gen, 2001). As indicated within the EFH assessment within the DEIS, egg and juvenile life stages are expected to be present within the project footprint at these temperatures throughout the winter and spring.

Throughout our involvement as a cooperating federal agency, NOAA Fisheries has expressed concerns that suspended sediments resulting from the construction of the proposed project will have substantial and unacceptable impacts on winter flounder spawning habitat. We have maintained that time of year work restrictions should be implemented and utilized as a method to avoid adverse impacts on winter flounder eggs. The applicant has utilized the SSFATE modeling program to predict approximately 12 acres of adverse impact on winter flounder EFH resulting from dredging-induced suspended sediment. Moreover, inputs to the SSFATE model have underestimated the habitat parameters of winter flounder spawning conditions and dredge operational requirements, and, therefore, the impacts on EFH are substantially underestimated.

Without an adequate characterization of potential adverse effects, we feel the DEIS does not meet the goals and objectives under the National Environmental Policy Act (NEPA).

Anticipated impacts on winter flounder

Weaver's Cove, LLC has proposed dredging within the Taunton River and Mount Hope Bay continuously for approximately 36 months. While the applicant contends impacts will be temporary, elevated suspended sediment conditions within the area will preclude the use of the area for successful winter flounder spawning through potentially four spawning seasons. Due to the importance of this area as a winter flounder spawning area, NOAA Fisheries views these impacts, while "temporary," to be substantial and unacceptable. At this time, we maintain that adverse impacts on winter flounder spawning habitat have not been fully accounted for due to insufficient inputs into the SSFATE model. Based on comments provided by NOAA Fisheries, the applicant appears to have utilized sufficient inputs to the SSFATE model for winter flounder spawning depth and winter flounder egg burial depth. However, NOAA Fisheries maintains that rate of winter flounder embryo development as well as assumed sediment loss from dredging operations (bucket loss) have not yet been accounted for adequately within the model.

Winter flounder spawning depth

In earlier versions of the dredging modeling report, NOAA Fisheries noted that the depth of winter flounder spawning areas had been underestimated. We had previously recommended that the applicant utilize a depth of eight meters for inputs into the SSFATE model in order to account for variability in depth of winter flounder spawning areas. While spawning occurs within deeper waters, winter flounder spawning is most common in waters of eight meters or less. The EFH Source Document indicates variability in the depth of winter flounder spawning habitats, and that winter flounder "spawning can occur at depths of less than five meters to more than 45 meters on Georges Bank" (Pereira et al. 1999). While winter flounder spawning occurs at these shallower depths, a review of the EFH Source Document describes evidence of spawning activity in deeper environments. Due to the wide variability of this spawning activity, NOAA Fisheries maintains that utilizing a <5 meter depth for winter flounder spawning as an input to the SSFATE modeling program does not adequately assess the potential impacts on the resource. By utilizing greater depths that account for this variability of winter flounder spawning depths, the aerial extent of EFH impacts will increase and thus indicate greater impacts on EFH. While the ACOE permit application identifies a number of model runs with a variety of depths, it currently appears that the applicant has utilized the 8-meter depth as recommended. Should additional SSFATE model runs be generated for this project, the applicant should continue to assume an 8-meter depth rather than areas less than 5 meters to account for variability in winter flounder spawning.

Winter flounder egg burial depth

Within the ACOE permit application, the applicant discusses the use of a 0.5-mm threshold depth of sediment deposition for impacts on winter flounder eggs in the SSFATE model, per earlier recommendations by NOAA Fisheries. Throughout the ACOE permit application, however, there are a number of references indicating the use of a 1.0-mm burial threshold. As stated within the EFH Source Document, winter flounder eggs range in size from 0.74-0.85 mm in diameter (Pereira

et al. 1999). At sediment deposition depths greater than 0.5-mm, winter flounder eggs can be adversely affected due to suffocation. Based on our review of the anticipated effects, it appears that the applicant has assumed the 0.5-mm threshold depth for the model as recommended. Should additional SSFATE model runs be generated for this project, the applicant should continue to utilize the 0.5-mm threshold rather than the 1.0-mm threshold.

Winter flounder egg incubation period

The SSFATE modeling program describes the maximum duration of exposure of winter flounder eggs to suspended sediment that would have adverse effects. This maximum duration of exposure is related to impacts on embryonic development in winter flounder. The SSFATE modeling program employed a maximum duration of exposure of winter flounder eggs to suspended sediment as being 21 days. This 21-day rate of embryo development for winter flounder eggs presented within the SSFATE model assumes normal winter conditions. The EFH Source Document describes protracted embryo developments taking upwards of 31 days (Pereira et al. 1999). NOAA Fisheries provided earlier comments that the rate of embryo development for winter flounder eggs is temperature dependent, and embryo hatching can be protracted for up to 40 days in a laboratory setting (Nelson, Personal communication, 2003). NOAA Fisheries maintains that the 21-day development period value does not allow for temperature variability and delayed incubation periods and, therefore, underestimates the potential dredging impacts on winter flounder embryos. Based on our review of the SSFATE modeling results, the applicant continues to optimize the embryo incubation period through the use of the 21-day input. FERC concludes on page 4-77 of the DEIS that, had the applicant changed the model to include 40 days as requested by NOAA Fisheries, impacts on winter flounder spawning habitat would have been greater.

Percent loss of material from dredging operations

NOAA Fisheries has previously recommended that the applicant utilize an estimate of 2 percent bucket loss for inputs into the SSFATE model. As presented within the ACOE permit application, Weaver's Cove has used a .66 percent input for modeling purposes. The applicant contends that a .66 percent bucket loss rate can be assumed for the proposed project based on studies performed for a recent Boston Harbor dredging project that included a significant portion of "improvement" dredging. NOAA fisheries maintains that a .66 percent bucket loss rate is not appropriate for the proposed dredging project. As a considerable portion of the proposed dredging is "maintenance," it is anticipated that material will be silty and have higher water content than firm, consolidated "improvement" materials. As indicated in the ACOE permit application, 85 percent of materials are expected to be silty. Consolidated materials are expected to contain less water, and, therefore, contribute less to suspended sediment loading of the waterway. In our opinion, the use of a .66 percent value for bucket loss underestimates the amount of suspended sediment that will result from this dredging project.

Scow/barge overflow

Scow/barge overflow has been utilized primarily in cases where suspended sediments are a concern during transit to, and at, the proposed dredged material disposal site. As the barge is filled beyond capacity, existing water displaced by the dredged material is expelled into the waterway. In the

case of Weaver's Cove, the use of barge/scow overflow will require less dewatering of material and more efficient handling of material when placed on site. While this technique may be acceptable in certain situations, it represents an introduction and elevation of suspended sediment at the dredge site. To date, this additional source of suspended sediment has not been included within the SSFATE modeling calculations. While the applicant is not proposing barge/scow overflow for dredging within the turning basin during the winter flounder spawning season, the applicant does propose the use of this technique within the remainder of the Taunton River during the winter flounder spawning season. While this additional source of suspended sediment has not been addressed in the SSFATE modeling calculations, NOAA Fisheries assumes that potential impacts on winter flounder spawning habitat would be increased.

Results of the SSFATE modeling program

According to the ACOE Public Notice and the DEIS, the applicant has attempted to utilize a dredging methodology to minimize adverse impacts on winter flounder. This dredging methodology is used in conjunction with the SSFATE modeling program to identify and characterize approximately 12 acres of impacts on winter flounder habitat. As stated above, NOAA Fisheries believes that the anticipated impacts from this dredging methodology is based on insufficient inputs into the SSFATE model. Upon review of the SSFATE modeling results within the ACOE permit application, NOAA Fisheries has determined the following:

- According to the DEIS, the dredging of native sediments within the turning basin will impact 6.18 acres of winter flounder spawning habitat. Dredging techniques include the use of a maximum 26-yard open bucket with barge overflow allowed from May through December, and a maximum 15-yard open bucket with no barge overflow allowed from January through April. However, inputs to the SSFATE model include a low estimate of .66% dredged material loss rate and assume 21 days incubation for winter flounder eggs. NOAA Fisheries believes that impacts on EFH have been underestimated.

- According to the DEIS, the dredging of surficial sediments within the turning basin will impact 5.87 acres of winter flounder spawning habitat. Dredging techniques include the use of a maximum 26-yard open bucket with barge overflow allowed from May through December, and no barge overflow allowed from January through April. However, inputs to the SSFATE model include a low estimate of .66% dredged material loss rate and assume 21 days incubation for winter flounder eggs. NOAA Fisheries believes that impacts on EFH have been underestimated.

- According to the DEIS, the dredging upstream of the Braga Bridge will impact .002 acres of winter flounder spawning habitat. Dredging techniques include the use of a maximum 26-yard open bucket year round with barge overflow allowed year round. However, inputs to the SSFATE model assume a 21-day incubation period for winter flounder eggs. Furthermore, the applicant is proposing barge/scow overflow to occur during the winter flounder spawning season, yet has failed to account for this additional source of sediment in the model. NOAA Fisheries believes that impacts on EFH have been underestimated.

- According to the DEIS, the dredging of the Taunton River within Rhode Island waters includes the use of a maximum 15-cubic yard open bucket year round with barge overflow allowed year round. However, this combination of dredging techniques has not been analyzed for impacts within the ACOE permit application. NOAA Fisheries believes that impacts on EFH have been underestimated.

At this time, NOAA Fisheries has concluded that insufficient inputs have been used in the SSFATE model, and that the use of barge/scow overflow as a dredging technique has not been included in the calculations. We feel that the 12 acres of anticipated impact on winter flounder spawning habitat is not an accurate depiction of foreseeable impacts and that the applicant has not yet analyzed the full impact on winter flounder. Therefore, there will be greater than 12 acres of impact to EFH.

Juvenile development of winter flounder

Upon hatching, winter flounder larvae are expected to remain in close proximity to hatching site, and young-of-year flounder are expected to remain in shallow inshore waters (Pereira et al., 1999). As indicated within the EFH assessment, winter flounder larvae are expected to be present within the project area from February-May, and young-of-year, juveniles, and adults are expected to be present throughout the year. The EFH assessment notes that larval stages of winter flounder may be adversely affected by sediment deposition resulting from dredging operations, yet concluded that the minimum effects threshold has not been exceeded for this life stage. NOAA Fisheries does not agree with this determination. Moreover, based on insufficient inputs to the SSFATE model as stated above, NOAA Fisheries maintains that adverse impacts on juvenile life stages of winter flounder have not been adequately characterized. Activities that have an impact that are more than minimal should be avoided.

Permanent loss of winter flounder habitat resulting from dredging

According to the DEIS, there will be approximately 11 acres of permanent loss of winter flounder spawning and juvenile development habitat resulting from the deepening and widening of the turning basin. While the expansion of this area may be necessary to fulfill the project purpose, there will be substantial impacts on winter flounder EFH within the Taunton River. Loss of this habitat will contribute to the cumulative adverse impact on winter flounder habitat within the Mount Hope Bay/Taunton River complex. It is important to note that winter flounder EFH in this area is currently affected by a number of anthropogenic impacts, most notably the Brayton Point Power Station in Somerset, Massachusetts.

Site Development

According to the ACOE Public Notice, there will be a permanent loss of approximately 1.15 acres of aquatic habitat, including approximately .04 acres of salt marsh habitat, .94 acres of intertidal habitat, and .17 acres of subtidal habitat. Salt marsh and intertidal mudflats have been designated by the US Environmental Protection Agency as "Special Aquatic Sites" pursuant to Section 404 (b)(1) of the Federal Clean Water Act (40 CFR section 230.41; 40 CFR section 230.42), due to their importance to aquatic ecosystem. Shallow subtidal areas serve as feeding habitat and shelter

for a number of juvenile fish species. Permanent loss of these habitats will contribute to the overall degradation of habitat within the Mount Hope Bay/Taunton River complex.

Cumulative Impacts

Section 4.13 of the DEIS provides a description of past, present, and future actions within the Taunton River and Mount Hope Bay that could cumulatively impact aquatic resources and habitats. FERC concludes that while the construction and operation of the Weaver's Cove LNG Project could contribute cumulatively to impacts on aquatic resources, the impacts will be relatively short-term and/or minor in comparison to those from non-point sources of pollution or from operation of facilities such as the Brayton Point Power Plant. Based on our comments above, NOAA Fisheries maintains that this conclusion is based on a level of impact that has not yet been adequately characterized. Furthermore, the fact that there are greater impacts within the area does not negate the fact that the proposed project will have a substantial impact on aquatic resources. NOAA Fisheries has determined that the proposed project will contribute to the cumulative impact on aquatic resources within the Taunton River and Mount Hope Bay, and adverse effects should be avoided.

In summary, NOAA Fisheries believes that adverse impacts on the federally managed winter flounder have not been adequately characterized due to insufficient inputs into the SSFATE modeling program. The applicant has utilized this model to determine that there will be a minimum of 12 acres of temporary impact on EFH. We believe that these impacts on winter flounder spawning and juvenile development habitat will be significantly greater. Furthermore, the DEIS states that there will be a permanent loss of 11 acres of winter flounder spawning habitat resulting from dredging, and 1.15 acres of salt marsh, intertidal, and subtidal habitat resulting from site development. We believe that the proposed project will contribute to the cumulative impact on the aquatic ecosystem of the Taunton River and Mount Hope Bay. Therefore, based on the above rationale, we conclude that this project will have a substantial and unacceptable impact on aquatic resources of national importance pursuant to Part IV, Paragraph 3(b) of the MOA.

Essential Fish Habitat Conservation Recommendations

As noted in the ACOE Public Notice, the proposed project will potentially impact approximately 200 acres of EFH designated under the MSA for the following species: haddock (larvae), red hake (larvae, juveniles, and adults), winter flounder (all life stages), windowpane flounder (all life stages), American plaice (larvae, juveniles, and adults), Atlantic sea herring (larvae, juveniles, and adults), bluefish (juveniles and adults), Atlantic mackerel (all life stages), summer flounder (larvae, juveniles, and adults), scup (all life stages), black sea bass (juveniles and adults), King mackerel (all life stages), Spanish mackerel (all life stages), and cobia (all life stages).

The applicant has based its analysis of impacts on EFH on the SSFATE model and determined that adverse effects on EFH are minimal. As substantiated above, the adverse impacts on EFH are present and have been underestimated. NOAA Fisheries believes that the SSFATE model, and, therefore, the EFH assessment, underestimates the impacts on winter flounder spawning and juvenile development habitat. In order to avoid, minimize, and mitigate adverse effects on EFH,

NOAA Fisheries recommends pursuant to Section 305(b)(4)(A) of the MSA and Part IV, Paragraph 3(b) of the MOA that the ACOE adopt the following EFH conservation recommendations:

1) No in-water silt-producing activity should occur between January 15-May 31 of any year to protect winter flounder spawning and juvenile development from increased sedimentation due to dredging. Impacts on winter flounder eggs and juvenile life stages may be avoided through the implementation of this work restriction.

2) Mitigation should be required to offset the permanent loss of 11 acres of winter flounder spawning and juvenile development habitat resulting from the expansion of the turning basin. The applicant should develop a mitigation plan that replaces the lost functional value of winter flounder EFH. Mitigation ratios should be specific to the specific type of work proposed.

3) Mitigation should be required to offset the 1.15 acres of permanent fill within intertidal, salt marsh, and subtidal areas resulting from site development. At this time, a draft salt marsh mitigation plan has been developed for this project. NOAA Fisheries recommends that mitigation include intertidal and subtidal areas, in addition to salt marsh. Mitigation ratios should be specific to the specific type of work proposed.

Please note that Section 305(b)(4)(B) of the MSA requires the ACOE to provide NOAA Fisheries with a detailed written response to these EFH conservation recommendations, including a description of measures adopted by the ACOE for avoiding, mitigating, or offsetting the impact of the project on EFH. In the case of a response that is inconsistent with NOAA Fisheries' recommendations, Section 305(b)(4)(B) of the MSA also indicates that the ACOE must explain its reasons for not following the recommendations. Included in such reasoning would be the scientific justification for any disagreements with NOAA Fisheries over the anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate, or offset such effects pursuant to 50 CFR 600.920(k).

Please also note that a distinct and further EFH consultation must be reinitiated pursuant to 50 CFR 600.920(l) if new information becomes available or the project is revised in such a manner that affects the basis for the above EFH conservation recommendations.

Fish and Wildlife Coordination Act Recommendations

The Taunton River serves as an important migratory pathway for a number of anadromous fishery resources such as Alewife (*Alosa pseudoharengus*), blueback herring (*Alosa aestivalis*), rainbow smelt (*Osmerus mordax*), and American shad (*Alosa sapidissima*). These resources serve as prey for a number of federally managed fishery resources, and direct or indirect impacts on them should be considered adverse effects on EFH. Furthermore, Mount Hope Bay and the Taunton River serve as habitat for the commercially and recreationally important Northern quahog (*Mercenaria mercenaria*), American (eastern) oyster (*Crassostrea virginica*), and soft-shelled clam (*Mya arenaria*). These and other shellfish species serve as forage for fishery resources in the area and serve as important linkages within the marine ecosystem.

Anadromous fishery resources

As stated above, the Taunton River serves as habitat for a number of anadromous fishery resources. These anadromous fishery resources serve as prey for a number of federally managed species and are considered a component of an EFH assessment pursuant to the MSA, as well as a concern as non-EFH trust resources that are covered under the Fish and Wildlife Coordination Act. American shad, blueback herring, alewife, and rainbow smelt have been designated as aquatic resources of national importance pursuant to section 906(e)(1) of the Water Resources Development Act of 1986. While the DEIS states that anadromous fishery resources migrating through the area will not be adversely affected by dredging operations, NOAA Fisheries remains concerned that construction activities and associated sediment plumes have the potential to impair migration of anadromous species. Chiasson (1993) found an increase in swimming activity of rainbow smelt when suspended sediments were present. In a laboratory study, Wildish and Power (1985) found that rainbow smelt avoided suspended sediment when concentrations were in excess of 20 Mg/L. The ACOE permit application does not analyze rainbow smelt for adverse impacts, however, it anticipates that peak concentrations within the Taunton River will exceed this threshold during dredging operations. Furthermore, sublethal effects to estuarine fishes can include decreased feeding, impacts from lowered oxygen levels, as well as impacts on gills and associated respiratory impacts (Wilber and Clarke, 2001).

The dredge-modeling program assumes a suspended sediment minimum effects threshold of 600ml/L for juvenile and adult blueback herring, alewife, and American shad. While the applicant maintains that suspended sediment in the river will be below this minimum effects threshold, NOAA Fisheries maintains that the assumed suspended sediment in the water column has been underestimated within the project footprint. Therefore, potential impacts on anadromous fishery resources within the Taunton River have not been fully accounted for. In order to take a risk averse approach for the conservation of anadromous fishery resources within the Taunton River, NOAA Fisheries recommends that no work should be conducted between March 1-July 31 of any year to avoid adverse impacts on upstream spawning migrations of Alewife, Blueback herring, rainbow smelt, and American shad. Downstream migrations of anadromous fishery resources in the Taunton River generally occur and need protection between June 15 and October 31 of any year. Alternatives should be developed and analyzed that avoid adverse impacts on downstream migrations of these aquatic resources of national importance.

Shellfish resources

The Weaver's Cove permit application notes that the project area serves as habitat for shellfish species including the Northern quahog (*Mercenaria mercenaria*), American (eastern) oyster (*Crassostrea virginica*), and soft-shelled clams (*Mya arenaria*). Shellfish from portions of this area, once depurated, are a viable food source and are suitable for human consumption. Furthermore, shellfish resources serve as prey for a number of federally managed fish species and adverse impacts are considered indirect adverse effects on EFH. The proposed dredging project has potential impacts on shellfish resources through both direct losses from dredging operations as well as sediment-related impacts prior to and during spawning periods. The DEIS states that the proposed project will permanently affect 84 acres of quahog habitat due to dredging of the federal navigation channel and turning basin. Once removed, reestablishment of shellfish within the

project area would be problematic due to consistent turbidity resulting from increased vessel traffic. The DEIS describes a mitigation plan for shellfish resources within the project site, including a shellfish harvesting program and a shellfish seeding program. While this may serve to offset permanent loss of shellfish habitat, NOAA Fisheries recommends that this mitigation proposal be developed, reviewed, and approved by federal and state resource agencies prior to the issuance of license or permit.

Dredge material volumes

The ACOE Public Notice and the DEIS describe the assumption of a one-foot overdredge allowance for the dredging portion of this project. In our opinion, the allowance of a one-foot overdredge underestimates the amount of material to be removed from the project footprint. In other projects with similar depths within federal navigation channels, the ACOE has argued for industry standards that utilize allowances of a two-foot overdredge to account for the imprecise nature of dredging operations. In order for a presentation of a more realistic picture of dredge volumes that will need disposal, we have recommended that a two-foot overdredge be anticipated in the calculation of dredging volumes. In this case, the overdredge volume should be estimated at approximately 922,000 cubic yards and a total volume of dredged material in excess of 3 million cubic yards. This additional volume of material should be accounted for in the overall volume of material that needs to be disposed. Accurate volumes of dredged material need to be accounted for in order to identify reasonable disposal options.

Offshore disposal of material

Based on recommendations by NOAA Fisheries and other resource agencies, a dredging plan should be developed which adequately protects aquatic resources of national importance as identified above. This plan should include time of year work restrictions for winter flounder, as well as for anadromous fishery resources, as referenced in above comments and recommendations. In order to utilize recommendations for the protection of living marine resources, it is foreseeable that offshore disposal of dredged material may be proposed for this project. NOAA Fisheries supports the Tier III analysis currently being pursued by the ACOE. Based on the results of this analysis, the use of an offshore disposal area should be evaluated for this project. This evaluation should include foreseeable impacts on living marine resources at the dredge site, as well as at the offshore disposal area. NOAA Fisheries recommends that this alternative be analyzed within the Final Environmental Impact Statement and prior to the issuance of an ACOE authorization.

Conclusions

Based upon the above rationale, we conclude that this project will have substantial and unacceptable direct, indirect, and cumulative impacts on aquatic resources of national importance. While the SSFATE model has determined that there will be approximately 12 acres of temporary impact on winter flounder EFH, NOAA Fisheries believes that this level of impact has been underestimated and may be significantly greater. At this time, we believe that these adverse impacts on EFH may be avoided through the use of appropriate time of year work restrictions. Furthermore, this project will result in approximately 12.15 acres of permanent alteration of habitats. In order to avoid substantial and unacceptable impacts on winter flounder EFH, NOAA Fisheries recommends that no work occur between January 15–May 31 of any year. In order to

provide protection for upstream spawning migrations of anadromous fishery resources within the Taunton River, we recommend that in-water silt producing activity be avoided between March 1–July 31 of any year. In order to protect downstream migrations of anadromous fishery resources, which need protection between June 15-October 31, we recommend that alternatives be proposed that avoid and minimize impacts. In order to offset the permanent loss of 11 acres of winter flounder spawning habitat and the permanent loss of intertidal, subtidal, and salt marsh habitats, we recommend that mitigation be required. In order to offset the permanent loss of 84 acres of shellfish habitat, a mitigation plan should be developed and presented to state and federal agencies for approval. We look forward to your response to our EFH conservation recommendations as well as all other recommendations pursuant to both Section 305(b)(4)(B) of the MSA and 50 CFR 600.920(k), Part IV, Paragraph 3(c) of the MOA. Should you have any questions about this matter, please contact Christopher Boelke at 978-281-9131.

Sincerely,

Patricia A. Kurkul
Regional Administrator

CC: FERC – Magalie Salas
USEPA – Robert Varney
USFWS- Michael Bartlett
MAEOEA – Ellen Roy Herzfelder
MADMF- Paul Diodati
MACZM – Susan Snow-Cotter
MADEP- John Felix
RI CRMC- Grover Fugate
RI DFW – Michael Lapinsky

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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
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DEC - 9 2004

Secretary Ellen Roy Herzfelder
Executive Office of Environmental Affairs
100 Cambridge Street, Suite 900
Boston MA 02114

RE: EOEA#13061, Weaver's Cove Energy LNG Project Supplemental Draft Environmental Impact Report

Dear Secretary Herzfelder:

The National Marine Fisheries Service (NOAA Fisheries) has reviewed the Supplemental Draft Environmental Impact Report (SDEIR) #13061 for the construction of a Liquefied Natural Gas (LNG) import facility along the Taunton River in Fall River, Massachusetts. NOAA Fisheries provided comments on September 17, 2004 to your office regarding the Draft Environmental Impact Report and foreseeable adverse effects to fishery resources and habitats resulting from construction and operation of the facility. At that time, letters describing similar concerns were sent to the Federal Energy Regulatory Commission (FERC) and the US Army Corps of Engineers (ACOE) through their respective review processes.

According to the DEIR, the proposed project will conduct dredging within an existing federal navigation channel, install structures, and discharge fill material in wetlands and waterways for the construction of the LNG import terminal and natural gas pipeline facilities. Specifically, the applicant has proposed to dredge approximately 2.5 million cubic yards of material from within a footprint of approximately 200 acres; replace a pier with jetty structure; install sheet pilings to stabilize and straighten approximately 2,650 ft of shoreline; and permanently fill approximately .04 acres of salt marsh habitat, .94 acres of intertidal habitat, and .17 acres of subtidal habitat.

A primary concern to NOAA Fisheries is the proposed dredging. This activity will remove a minimum of approximately 2.5 million cubic yards of material from the channel and turning basin with upland, on-site placement of material. The applicant has proposed the dredging of the Taunton River to occur for a period of approximately 36 months. Upon review of the SDEIR, NOAA Fisheries believes that the project, as proposed, will result in substantial and unacceptable impacts on living marine resources.

Importance of the Taunton River and Mount Hope Bay

As noted previously, the Taunton River/Mount Hope Bay complex has been designated as EFH for 14 federally managed species, including the commercially and recreationally important winter flounder (*Pseudopleuronectes americanus*). The New England Fishery Management Council currently manages winter flounder under the Northeast Multispecies (Groundfish) Fishery Management Plan. The proposed project area serves as important winter flounder spawning and

juvenile development habitat. As indicated within the DEIR, egg and juvenile life stages are expected to be present within the project footprint throughout the winter and spring.

The Taunton River serves as an important migratory pathway for a number of anadromous fishery resources, including Alewife (*Alosa pseudoharengus*), blueback herring (*Alosa aestivalis*), rainbow Smelt (*Osmerus mordax*), and American shad (*Alosa sapidissima*). These anadromous fishery resources serve as prey for a number of federally managed species, and are considered a component of EFH pursuant to the Magnuson-Stevens Fishery Conservation and Management Act, as well as a concern as non-EFH trust resources that are covered under the Fish and Wildlife Coordination Act. American Shad, blueback herring, alewife, and rainbow smelt have been designated as aquatic resources of national importance pursuant to section 906(e)(1) of the Water Resources Development Act of 1986.

Furthermore, Mount Hope Bay and the Taunton River serve as habitat for the commercially and recreationally important Northern quahog (*Mercenaria mercenaria*), American (eastern) oyster (*Crassostrea virginica*), and soft-shelled clam (*Mya arenaria*). These and other shellfish species serve as forage for fishery resources in the area and serve as important linkages within the marine ecosystem. Shellfish from portions of this area, once depurated, are a viable food source and are suitable for human consumption. Shellfish resources also are prey for a number of federally managed fish species and adverse impacts are considered indirect adverse effects on EFH.

Throughout our involvement as a cooperating federal agency, NOAA Fisheries has expressed concerns that suspended sediments resulting from the construction of the proposed project will have substantial and unacceptable impacts on winter flounder spawning and juvenile development habitat. Weaver's Cove, LLC has proposed dredging within the Taunton River and Mount Hope Bay for approximately 36 months. While the applicant contends impacts will be temporary, elevated suspended sediment conditions within the area will preclude the use of the area for successful winter flounder spawning through potentially four spawning seasons. In addition, we anticipate that there will be the permanent loss of approximately 11 acres of winter flounder spawning habitat as a result of the dredging. This direct loss would occur from depth changes associated with the expansion of the turning basin and portions of the channel. Furthermore, we maintain that the proposed project will have direct and indirect impacts on anadromous fish, shellfish, salt marsh, and intertidal mudflat. Within our September 17, 2004 comment letter on the DEIR, NOAA Fisheries outlined a number of concerns regarding anticipated adverse impacts on fishery resources and habitat. At this time, we maintain that the project will have adverse effects should it proceed as proposed.

Suspended sediment modeling program

In our earlier comments, NOAA Fisheries raised the issue regarding inputs to the SSFATE/SSDOSE (model) modeling program utilized for this project. These inputs are important due to the fact that the resulting outputs attempt to determine the extent and duration of potential impacts on fishery resources and habitats. At this time, we maintain that adverse impacts on winter flounder spawning habitat have not been fully accounted for due to insufficient inputs into the model. Specifically, NOAA Fisheries maintains that the depth of winter flounder spawning activity,

rate of winter flounder embryo development, as well as assumed sediment loss from dredging operations (bucket loss) have not yet been accounted for adequately within the model.

Winter flounder spawning depth

In earlier versions of the dredging modeling report, NOAA Fisheries had recommended that the model should assume depths greater than 5 meters to account for variability in depth of winter flounder spawning habitat. While a variety of assumed depths were analyzed within the DEIR, section 4.0 of the SDEIR notes that the applicant has assumed a winter flounder spawning of 5 meters. The EFH source document indicates variability in the depth of winter flounder spawning habitats, and that winter flounder "spawning can occur at depths of less than five meters to more than 45 meters on Georges Bank" (Pereira et al. 1999). While winter flounder spawning occurs at these shallower depths, a review of the EFH Source Document describes evidence of spawning activity in deeper environments. Due to the wide variability of this spawning activity, NOAA Fisheries maintains that utilizing a 5 meter depth for winter flounder spawning as an input to the modeling program does not adequately assess the potential impacts on the resource. By utilizing greater depths that account for this variability of winter flounder spawning depths, the aerial extent of EFH impacts will increase and thus indicate greater impacts on EFH.

Winter flounder egg incubation period

The modeling program describes the maximum duration of exposure of winter flounder eggs to suspended sediment that would have adverse effects. This maximum duration of exposure is related to impacts on embryonic development in winter flounder. The SSFATE modeling program employed a maximum duration of exposure of winter flounder eggs to suspended sediment as being 21 days. This 21-day rate of embryo development for winter flounder eggs presented within the model assumes normal winter conditions. The EFH Source document describes protracted embryo developments taking upwards of 31 days (Pereira et al. 1999). NOAA Fisheries provided earlier comments that the rate of embryo development for winter flounder eggs is temperature dependent and embryo hatching can be protracted for up to 40 days in a laboratory setting (Nelson, Personal communication, 2003). NOAA Fisheries maintains that the 21-day development period value does not allow for temperature variability and delayed incubation periods and, therefore, underestimates the potential dredging impacts on winter flounder embryos. While we had previously recommended that the applicant increase the assumed period of egg incubation, the applicant continues to optimize the embryo incubation period through the use of the 21-day input.

Percent loss of material from dredging operations

NOAA Fisheries has previously recommended that the applicant utilize an estimate of 2 percent dredge bucket loss for inputs into the model. Within the SDEIR, however, Weaver's Cove has chosen to utilize a .66 percent input for modeling purposes within the turning basin. The applicant contends that a .66 percent bucket loss rate can be assumed for the proposed project based on studies performed for a recent Boston Harbor dredging project that included a significant portion of "improvement" dredging. NOAA Fisheries maintains that a .66 percent dredge bucket loss rate is not appropriate for the proposed dredging project. As a considerable portion of the proposed dredging is "maintenance," it is anticipated that material will be silty and have higher water content

than firm, consolidated "improvement" materials. As indicated in the ACOE permit application, 85 percent of materials are expected to be silty. Consolidated materials are expected to contain less water and, therefore, contribute less to suspended sediment loading of the waterway. In our opinion, the use of a .66 percent value for bucket loss within the turning basin underestimates the amount of suspended sediment that will result from this dredging project.

Impacts to winter flounder habitat

Based on the model inputs outlined above, the SDEIR concludes that there will be 4.95 acres of impact on winter flounder spawning habitat. NOAA Fisheries maintains that due to inappropriate input to the model, actual impacts on winter flounder EFH from suspended sediments will be greater than 4.95 acres. Therefore, we cannot concur with the applicant's conclusion that adverse impacts will be minimal. Impacts on winter flounder EFH from suspended sediments represents an impact which can be avoided and additional steps should be taken to minimize effects to public trust resources.

According to the SDEIR, there will be approximately 11 acres of permanent loss of winter flounder spawning habitat resulting from the deepening and widening of the turning basin. While the expansion of this area may be necessary to fulfill the project purpose, there will be substantial impacts on winter flounder EFH within the Taunton River. Loss of this habitat will contribute to the cumulative adverse impact on winter flounder habitat within the Mount Hope Bay/Taunton River complex. Should this project move forward as proposed, these impacts on EFH should be mitigated.

Additional impacts on fishery habitat

According to the DEIR and the ACOE Public Notice, there will be a permanent loss of approximately 1.15 acres of aquatic habitat, including approximately .04 acres of salt marsh habitat, .94 acres of intertidal habitat, and .17 acres of subtidal habitat. Salt marsh and intertidal mudflats have been designated by the US Environmental Protection Agency as "Special Aquatic Sites" pursuant to Section 404 (b)(1) of the Federal Clean Water Act (40 CFR section 230.41; 40 CFR section 230.42), due to their importance to the aquatic ecosystem. Shallow subtidal areas serve as feeding habitat and shelter for a number of juvenile fish species. Permanent loss of these habitats will contribute to the overall degradation of habitat within the Mount Hope Bay/Taunton River complex. While the applicant has generated a preliminary mitigation plan for salt marsh impact, further mitigation should be explored to compensate for the loss of intertidal and subtidal functions and values.

Anadromous fishery resources

In earlier comments, NOAA Fisheries raised concerns over dredging impacts on anadromous fishery resources. While the SDEIR concludes that anadromous fishery resources migrating through the area will not be adversely affected by dredging operations, NOAA Fisheries maintains that construction activities and associated sediment plumes can impair migration of anadromous species. The applicant has assumed that the proposed dredging project will result in suspended sediment concentrations ranging from 10 mg/l to 66 mg/l. However, these assumed sediment concentrations are based, in part, on the assumed dredge bucket loss. As we have stated earlier,

NOAA Fisheries believes that the assumed dredge bucket loss of .66%, and thus the resulting suspended sediment concentrations, have been underestimated.

The dredge-modeling program assumes a suspended sediment concentration "minimum effect" threshold of 600 mg/L for juvenile and adult blueback herring, alewife, and American shad. Table 5.5 of the ASA modeling report states that no data were available for these species and life stages, and assumes a 600mg/l threshold. At this time, it is not clear how this 600 mg/l threshold has been determined. Furthermore, this "minimum effect" threshold is problematic since it is based on sublethal and lethal thresholds, as opposed to behavioral response thresholds (i.e., avoidance, increased swimming activity) which are expected to be lower. Behavioral responses are important in light of the fact that the Taunton River serves as an important upstream and downstream migratory pathway and movement to and from spawning areas could be affected. At this time, NOAA Fisheries believes that adverse impacts on American Shad, alewife, and blueback herring have not been adequately analyzed.

Chiasson (1993) found an increase in swimming activity of rainbow smelt when suspended sediments were present. Concentrations where behavioral impacts were noted ranged from 10 mg/L – 40 mg/L. In a laboratory study, Wildish and Power (1985) found that rainbow smelt avoided suspended sediment when concentrations were in excess of 20 mg/L. Based on our review, anticipated concentrations of suspended sediment within the Taunton River will have behavioral impacts on smelt during dredging operations. Although we have raised the rainbow smelt issue previously, the DEIR and the SDEIR fail to analyze adverse impacts on rainbow smelt.

NOAA Fisheries believes that assumed suspended sediment concentrations have been underestimated for the proposed project. We believe that the "minimum effects" thresholds used for analysis do not adequately anticipate behavioral effects on anadromous fishery resources within the Taunton River. Furthermore, we maintain that adverse effects to rainbow smelt have yet to be characterized as recommended previously. Absent this analysis, efforts should be made to avoid adverse impacts on these aquatic resources of national importance.

Shellfish resources

As stated within our earlier comments, the proposed dredging project has potential impacts on shellfish resources through both direct losses from dredging operations as well as sediment-related impacts prior to and during spawning periods. The DEIR states that the proposed project will permanently affect 84 acres of quahog habitat due to dredging of the federal navigation channel and turning basin. Once removed, reestablishment of shellfish within the project area would be problematic due to consistent turbidity resulting from increased vessel traffic. The DEIR describes a mitigation plan for shellfish resources within the project site, including a shellfish harvesting program and a shellfish seeding program. While this may serve to offset permanent loss of shellfish habitat, NOAA Fisheries maintains that this mitigation proposal be developed, reviewed, and approved by federal and state resource agencies prior to the issuance of license or permit.

Dredge material volumes

NOAA Fisheries previously commented on the applicants assumption of a one-foot overdredge allowance for the dredging portion of this project. In our opinion, the allowance of a one-foot

overdredge underestimates the amount of material to be removed from the project footprint. In other projects with similar depths within federal navigation channels, the ACOE has argued for industry standards that utilize allowances of a two-foot overdredge to account for the imprecise nature of dredging operations. In order for a presentation of a more realistic picture of dredge volumes that will need disposal, we have recommended that a two-foot overdredge be anticipated in the calculation of dredging volumes. In this case, the overdredge volume should be estimated at approximately 922,000 cubic yards and a total volume of dredged material in excess of 3 million cubic yards. This additional volume of material should be accounted for in the overall volume of material that needs to be disposed. Accurate volumes of dredged material need to be accounted for in order to identify reasonable disposal options.

Recommendations to protect fish habitat and living marine resources

NOAA Fisheries utilizes a sequential approach of avoidance, minimization, and, if necessary, compensatory mitigation to offset adverse impacts on fishery resources and habitats. NOAA Fisheries maintains that adverse effects to public trust resources have been significantly underestimated for the proposed project. Based upon the above rationale, we conclude that this project will have substantial and unacceptable direct, indirect, and cumulative impacts on aquatic resources of national importance. Therefore, should this project move forward as proposed, we recommend the following:

1) No in-water silt-producing activity should occur between January 15-May 31 of any year to protect winter flounder spawning and juvenile development from increased sedimentation due to dredging. Impacts on winter flounder egg and juvenile life stages may be avoided through the implementation of this work restriction.

2) No in-water silt-producing activities should occur between March 1-July 31 of any year to avoid adverse impacts on upstream spawning migrations of Alewife, Blueback Herring, Rainbow Smelt, and American Shad. Downstream migrations of anadromous fishery resources in the Taunton River generally occur and need protection between June 15 and October 31 of any year. Alternatives should be developed and analyzed that avoid adverse impacts on downstream migrations of these aquatic resources of national importance.

3) Compensatory mitigation should be required to offset the permanent loss of 11 acres of winter flounder spawning and juvenile development habitat resulting from the expansion of the turning basin. The applicant should develop a mitigation plan that replaces lost functional values of winter flounder EFH and should be coordinated with state and federal resource agencies.

4) Mitigation should be required to offset the 1.15 acres of permanent fill within intertidal, salt marsh, and subtidal areas resulting from site development. At this time, a draft salt marsh mitigation plan has been developed for this project. NOAA Fisheries recommends that mitigation include intertidal and subtidal areas, in addition to salt marsh. Mitigation ratios should be specific to the specific type of work proposed.

Conclusions

The Taunton River and Mount Hope Bay serve as important habitat for a number of living marine resources. As noted above, NOAA Fisheries maintains that the construction of the Weavers Cove LNG facility, as proposed, represents a substantial and unacceptable adverse impact on aquatic resources of national importance. At this time, we believe that adverse impacts on EFH resulting from dredging operations may be minimized through the use of appropriate time of year work restrictions. NOAA Fisheries recommends that no work occur between January 15–May 31 of any year in order to minimize adverse impacts on winter flounder spawning and juvenile development habitat. In order to provide protection for upstream spawning migrations of anadromous fishery resources within the Taunton River, we recommend that in-water silt-producing activity be avoided between March 1–July 31 of any year. In order to protect downstream migrations of anadromous fishery resources, which need protection between June 15-October 31, we recommend that alternatives be proposed and analyzed within the FEIR. In order to offset the permanent loss of 11 acres of winter flounder spawning habitat and the permanent loss of intertidal, subtidal, and salt marsh habitats, we recommend that compensatory mitigation be required. In order to offset the permanent loss of 84 acres of shellfish habitat, a mitigation plan should be developed and presented to state and federal agencies for approval. Should you have questions regarding these comments, please contact Christopher Boelke of my staff at (978) 281-9131.

Sincerely,

Peter D. Colosi, Jr.
Assistant Regional Administrator
for Habitat Conservation

CC: USACE – Christine Godfrey
FERC – Rich McGuire
USEPA – Robert Varney
USFWS- Michael Bartlett
MADMF- Paul Diodati
MACZM – Susan Snow-Cotter
MADEP- John Felix
RI CRMC- Grover Fugate
RI DFW – Michael Lapinsky
NOAA Fisheries – Pat Kurkul

References

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The Commonwealth of Massachusetts

William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

December 7, 2004

Secretary Ellen Roy Herzfelder
Executive Office of Environmental Affairs
Attn. MEPA Unit
100 Cambridge Street, Suite 900
Boston, MA 02114

RE: Weaver's Cove Energy LLC and Mill River Pipeline, LLC, Fall River, Freetown, Somerset, & Swansea, MA. MHC #RC.33045. PAL #1540. COE-NED-R-File #2004-2355. FERC Docket #CP04-36-000 & CP04-41-000. **EOEA #13061.**

Dear Secretary Herzfelder:

Staff of the Massachusetts Historical Commission (MHC), office of the State Historic Preservation Officer, have reviewed the Supplemental Draft Environmental Impact Report (SDEIR) submitted by Weavers Cove Energy, LLC, for the proposed project referenced above, received by the MHC on November 17, 2004, November 2, 2004, and November 1, 2004.

As indicated in the SDEIR, archaeological surveys are being conducted, and MHC looks forward to reviewing and commenting on the results.

Concerning historical architectural resources, the multiple photographs keyed to a sketch map included in Attachment 20 of the SDEIR will assist in FERC's determination of the APE for visual effects in relation to the historic Winslow burial Ground in Freetown. The MHC respectfully reiterates its request for the project consultants to submit plans and elevation drawings of the meter station and photographic simulations for the meter station and pipeyard in relation to the historic cemetery. The Form A for the Lower North Main Street Area, Form E for St. John's Roman Catholic Cemetery, and Form A for the Riverside Avenue South Area in Attachment 22 of the SDEIR will assist FERC in evaluating the National Register eligibility of historic properties in the APE, in consultation with the MHC (36 CFR 800.4(c)(1)).

The MHC respectfully reiterates its request for FERC's determination of the APE for the proposed project pursuant to 36 CFR 800.4(a)(1). While the proponent's consultant has proposed an APE for visual effects, it is FERC's responsibility under the Section 106 regulations to make this determination (36 CFR 800.4(a)(1)). FERC should take into consideration any comments regarding the APE from the public and interested parties, including but not limited to the local historical commission(s) (36 CFR 800.2). The

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MHC looks forward to receiving, reviewing, and commenting on FERC's determination of the APE for visual effects.

Once the APE is determined by FERC, any needed supplemental historic properties survey should be completed in order to identify all the historic properties within the APE that are listed or eligible for listing. The survey documentation provided to date evidences considerable effort by the consultant and will greatly assist FERC in evaluating the National Register eligibility of historic properties in the APE, in consultation with the MHC (36 CFR 800.4(c)(1)). MHC staff will require a completed Form B, which can be downloaded from the MHC website at www.sec.state.ma.us/mhc, for each of the potentially-eligible properties within the APE in order to assist MHC in completing an eligibility opinion (36 CFR 800.4). The MHC requests the opportunity to review and comment on the scope of any supplemental historic properties survey that may be required.

MHC looks forward to continued consultation on this project. MHC will continue to review detailed results of the cultural resource investigations as the results become available, and in consultation with FERC and other consulting parties, offer our comments to avoid, minimize, or mitigate adverse effects to significant historic and archaeological resources.

These comments are offered to assist in compliance with Section 106 of the National Historic Preservation Act of 1966 as amended (36 CFR 800), MGL c. 9, ss. 26-27C, the Secretary of Interior's *Standards and Guidelines for Archeology and Historic Preservation* (48 Fed. Reg. 190 (1983)), and MEPA (301 CMR 11). Please contact Edward L. Bell (Senior Archaeologist) or Ryan T. Maciej (Preservation Planner) of my staff if you have any questions or require additional information.

Sincerely,

Brona Simon

Brona Simon
State Archaeologist
Deputy State Historic Preservation Officer
Massachusetts Historical Commission

xc:
Ted Gehrig, Weaver's Cove LLC
Theodore A. Barten, Epsilon Associates, Inc.
Taya Dixon, Epsilon Associates, Inc.
Deborah C. Cox, PAL
Secretary Magalie R. Salas, FERC
Crystal Gardner, USACOE-NED Regulatory, Attn. Ted Lento
✓Kate Atwood, USACOE-NED
Massachusetts Commission on Indian Affairs
Cheryl Andrews-Maltais, THPO, Wampanoag Tribe of Gay Head (Aquinnah)
Assonet Band, Wampanoag Nation
Victor T. Mastone, Massachusetts Board of Underwater Archaeological Resources
Rhode Island Historical Preservation & Heritage Commission
Fall River, Freetown, Somerset, and Swansea Historical Commissions

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December 7, 2004

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State Archaeologist
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Assonet Band, Wampanoag Nation
Victor T. Mastone, Massachusetts Board of Underwater Archaeological Resources
Rhode Island Historical Preservation & Heritage Commission
Fall River, Freetown, Somerset, and Swansea Historical Commissions

EPA New England

Date: 12/10/04

U.S. Environmental Protection Agency
Office of the Regional Administrator
One Congress Street, Suite 1100
Boston, MA 02114-2023
Phone: (617) 918-1025
Fax: (617) 918-1029

PLEASE DELIVER TO: Christine Godfrey, US Army Corps of Engineers

Fax No. 978 - 318 - 8303

Pages to Follow: 12

From: Timothy L. Timmermann

Comments:

Comments on Weavers Cove SDEIR

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

OFFICE OF THE
REGIONAL ADMINISTRATOR

December 10, 2004

Secretary Ellen Roy Herzfelder
Executive Office of Environmental Affairs
MEPA Unit
100 Cambridge Street, Suite 900
Boston, Massachusetts 02114

RE: Supplemental Draft Environmental Impact Report for Weaver's Cove Energy, LLC and Mill River Pipeline LLC, Liquified Natural Gas (LNG) Import Terminal, Fall River, Massachusetts, EOEA Number 13061

Dear Secretary Herzfelder:

This letter and attachment provide EPA's comments on the Supplemental Draft Environmental Impact Report (SDEIR) for the Weaver's Cove LNG project in Fall River, Massachusetts. The proposed project includes the development of an LNG import terminal, two natural gas laterals, and two meter and regulation stations. Development of the project would require dredging areas of the federal navigation channel and turning basin within the Taunton River and disposal of the sediment on the project site.

As you know, EPA submitted comments on the joint Draft Environmental Impact Statement (DEIS)/DEIR for this project in September this year. In those comments, we questioned both the adequacy of the analysis with respect to the alternatives, the dredging and disposal program, and associated impacts, and the acceptability of the project as proposed; and we recommended that the Federal Energy Regulatory Commission (FERC) prepare a supplemental Environmental Impact Statement. We were pleased to see that the MEPA certificate on the DEIR requiring the SDEIR highlighted many of the same issues and required a more complete investigation of alternatives, impacts and mitigation measures. We continue to believe that a combined Massachusetts Environmental Policy Act (MEPA) and National Environmental Policy Act (NEPA) process is an efficient public way to evaluate and better understand the impacts of the Weaver's Cove project proposal and alternatives to that proposal with the ultimate goal of informed decision-making at the local, state and federal level. We agree with your suggestion that efforts should be made to reintegrate the MEPA and NEPA processes at an appropriate point in the future–most likely when FERC prepares a Final Environmental Impact Statement (FEIS) for the project. In addition to our comments on the SDEIR (included in the attachment to this letter), we also intend to comment on any subsequent analysis provided by FERC pursuant to NEPA.

As we indicated in our comments on the DEIS/DEIR, EPA continues to believe that well sited LNG facilities in the region can help to maintain recent air quality gains and allow utilities to continue to provide heat and electricity to their customers without interruption.

We appreciate the opportunity to comment on the SDEIR and look forward to continuing to work with your office during the review of the Weaver's Cove project. Please contact Timothy Timmermann at 617-918-1025 with any questions about this letter.

Sincerely,

Elizabeth A. Higgins
Director, Office of Environmental Review

attachment

cc:

Ted Gehrig, Weavers Cove LLC
Ted Barton, Epsilon Associates
Christine Godfrey, US Army Corps of Engineers
Chris Boelke, National Marine Fisheries Service
Vin Malkoski, Massachusetts Division of Marine Fisheries
Dave Janik, Massachusetts Office of Coastal Zone Management
Rich McGuire, Federal Energy Regulatory Commission

Additional Detailed Comments for the Weaver's Cove LNG project SDEIR
Fall River, Massachusetts

EPA offers the following comments for your consideration as you evaluate the SDEIR analysis.

Alternatives

The DEIR Certificate called for an expanded analysis of the potential impacts "...associated with the alternative coastal locations examined in the DEIR, particularly Providence Harbor and the facility proposed off the shore of Cape Ann." Our comments on the DEIS paralleled the DEIR Certificate, noted that offshore LNG facility development was inappropriately eliminated as a reasonable alternative, and indicated that a comprehensive analysis is required for purposes of NEPA and the Corps of Engineers permit process. In addition to the information Weaver's Cove provides in the SDEIR, there has been an exchange between Weaver's Cove LLC and the proponent for the Excelerate Energy offshore project on the FERC docket for the Weaver's Cove project. Even though that exchange occurred after the SDEIR was published, we encourage you to review it for context and background as you evaluate the Weaver's Cove SDEIR.

The SDEIR argues that the Northeast Gateway project promoted by Excelerate Energy will not be able to provide reliable continuous service due to weather conditions, and that it is technically unproven, more environmentally damaging, and more expensive than the proposed Weaver's Cove project. Moreover, the SDEIR notes that "NEPA precedent is clear that a project proponent does [not] need to analyze every potential alternative that arises during the pendancy of an application."[1] The SDEIR also argues against the offshore energy bridge alternative because it would not be a functional substitute to the Weaver's Cove facility, since it would not be able to deliver LNG by truck to the peak shaving market.

While we recognize the applicant's interest in delivering LNG by truck as one component of the project, one that is reflected in the purpose and need statement in the DEIS/DEIR, we also believe that the National Environmental Policy act requires the consideration of a range of alternatives, including projects that might not be acceptable to the applicant because they are partial alternatives. Under NEPA, an agency's evaluation of alternatives needs to look at alternative means to achieve the general goal of an action, as defined by the agency from a broad public perspective rather than solely the applicant's. Alternatives providing only partial solutions to the applicant's goals should be considered if they are bounded by the notion of feasibility or are otherwise reasonable. In this instance, we view an alternative such as the Northeast Gateway proposal as a reasonable alternative that should be fully considered during the environmental review because it could bring a significant supply of much needed natural gas into the region. It is recognized that an offshore facility would be unable to meet the demands of truck deliveries of

[1]We assume that the author intended to include the word "not" in this sentence given the context of the sentence.

LNG for the peak shaving and storage markets. However, an offshore facility or a combination of onshore and offshore facilities, could contribute to the region's supply needs. A comparison of the relative impacts of these individual alternatives should be a significant part of both the MEPA and NEPA processes.

Comparison of Weaver's Cove *(Taunton River/Mount Hope Bay)* dredging and Providence River dredging projects

The SDEIR identifies several unavoidable impacts associated with the dredging and ultimate operation of the project:

- 12 acres of winter flounder spawning habitat permanently lost through dredging
- ongoing prop wash impacts with each LNG tanker shipment
- ongoing entrainment/impingement impacts from ballast water exchange
- open trench construction of the gas pipeline across the Taunton River

The SDEIR then compares the proposed project to the Corps of Engineers' Providence River and harbor dredging project arguing that: 1) resource constraints that existed in the Providence River parallel those in the Taunton River; and 2) because the Providence River project advanced with specific conditions to protect the environment, similar conditions applied to the Weaver's Cove effort should eliminate significant impacts to the Taunton River and Mount Hope Bay. While we understand why the projects have been compared, it is important to recognize that there are significant differences between the two. In short , we do not agree with the premise that the dredging of the Providence River and the dredging proposed in the Taunton for the Weaver's Cove project are truly comparable based on both design and environmental conditions where the work is proposed. The justifications for our conclusion are outlined below. The differences between the projects lead us to support more comprehensive measures than have been suggested by the project proponent to protect the aquatic organisms of the Taunton River and Mount Hope Bay.

First, the conditions of aquatic resources in the two water bodies are different. Fish populations have declined throughout Narragansett Bay, but not to the extent that exists in Mount Hope Bay where they have collapsed to levels barely above zero. Sixteen of twenty one species historically caught in Mount Hope Bay have shown dramatic reductions in abundance since the mid 1980s. Mark Gibson, Deputy Chief of Rhode Island Division of Fish and Wildlife, statistically compared fish abundance in Narragansett Bay (including the Providence River) to fish abundance in Mount Hope Bay. Mr. Gibson found that winter flounder, hogchoker, tautog and windowpane are present at statistically significantly lower abundance levels in Mount Hope Bay than in Narragansett Bay.

Significant management actions have been and are being taken to address the loss of these resources. Both Rhode Island and Massachusetts have eliminated commercial fishing since the late 1980s in Mount Hope Bay. Strict recreational limits are also in place by both states which

essentially eliminate recreational fishing for winter flounder within Mount Hope Bay. The City of Fall River is just completing (December, 2004) Phase 1 of their Combined Sewer Overflow (CSO) plan at the cost of $110 million. Their efforts will eliminate slightly more than half of their CSOs into the Taunton River. By 2009 the city plans to complete a Phase 2 effort which will eliminate the remaining CSOs for a cost of approximately $45 million.

In addition, the Massachusetts Department of Environmental Protection (MADEP), Rhode Island Department of Environmental Management (RIDEM) and EPA have been working to reduce cooling water intake and thermal discharges from several power plants within Mount Hope Bay and the Taunton River to reduce entrainment and impingement losses and to improve habitat quality. Currently, Brayton Point Station has offered to reduce their flow and thermal discharge by 33% at a USGen cost estimate of $60 million. EPA and the Commonwealth of Massachusetts developed a discharge permit in conjunction with NMFS, MADMF, MACZM, and RIDEM that requires a 95% reduction in flow and thermal discharge from the facility. This permit is currently under appeal.

Several other important differences suggest that these dredging projects are not truly comparable. First, the temporal differences are substantial. Weaver's Cove proposes dredging over a minimum period of 3 years, while the Providence River effort took 18 months. As a result, the Weaver's Cove project has the potential to impact 3 separate spawning seasons. This potential to impact multiple spawning seasons is particularly troubling. The Taunton River serves as important spawning habitat for numerous anadromous fish and winter flounder, all of which have very high fidelity to their natal spawning grounds. Impacting multiple year classes of fish from one population jeopardizes the long term viability of that population. This is especially true for the winter flounder population in Mount Hope Bay.

Another significant difference between the two dredging projects is the dredge footprint. Superficially, it appears that both projects cover approximately similar linear distances--about 7 miles for the Weaver's Cove project and 10 miles for the Providence River project. In the Providence River, this large linear distance allowed project managers to move the dredges out of areas identified as winter flounder spawning habitat during the majority of the spawning season. This was possible because the volume of dredge material was relatively evenly distributed throughout the dredging footprint. Dredge volumes in the Weaver's Cove project are heavily weighted to the lower Taunton River–the area that is also home to critical fish spawning areas. Thus, the use of dredge sequencing is not a viable mitigation measure for the majority of the Weaver's Cove dredging activity.

Dredging issues

The SDEIR identifies measures Weaver's Cove will take to minimize the impact of dredging. These include the elimination of scow overflow, use of a closed bucket for dredging of soft sediments, dredging north and south in the Taunton River to minimize the turbidity plume that could affect anadromous fish passage, and the adoption of a Time of Year restriction (TOY) of

February, March and April for winter flounder spawning. EPA acknowledges these steps as an improvement over the initial proposal, but we still view the impacts from the dredging, even with the adoption of these management steps, as environmentally unsatisfactory. We believe that more comprehensive measures, described below, are necessary to prevent unsatisfactory impacts from the dredging.

Time of Year Restrictions

The use of TOY restrictions is a standard practice to avoid impacts to important spawning periods or times of fish migration. These restrictions vary waterbody to waterbody, because they are dependent on the aquatic resources present, the condition of those resources, and the likelihood that the proposed project will pose a threat to those resources. In Mount Hope Bay, TOY restrictions have been used in other projects in an effort to avoid or minimize impacts to fish populations. For example, Brayton Point Station has also conducted dredging near their dock facility and intake in accordance with established dredge windows.[2] In addition, rehabilitation of the state pier in Fall River has been subject to restrictions from January to July for inwater work and construction.

National Marine Fisheries Service (NMFS) has clearly laid out its recommended TOY restrictions of January 15 to July 31. These dates were chosen to protect winter flounder spawning, shellfish spawning, and anadromous fish inward migration and spawning. The Massachusetts Division of Marine Fisheries (MADMF) has provided TOY recommendations as well, which largely agree with those recommended by NMFS. However, MADMF extends the length of their recommended window until the end of October. The rational for this is to protect anadromous fish outward migration.

EPA has considered the specific activities involved with this project within the context of the resources present in Mount Hope Bay. Additionally, EPA has considered the current condition of those organisms and their extreme vulnerability, when determining the appropriate dredge windows. As a result, EPA believes that the more protective window recommended by MADMF is warranted to protect fish populations that are in a dire condition. This window is more extensive than the windows adopted for some of the projects (Brayton Point dredging, pier rehabilitation in Fall River) described earlier. The reason for this difference is that, in EPA's judgement, Weaver's Cove, due to the majority of its work occurring in the lower Taunton River, has a greater potential for impact to anadromous fish outward migration. We look forward to continuing our discussion of these issues with fisheries experts at the MADMF and the NMFS.

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[2]In addition, Brayton Point Station has been run in what's known as a "piggyback" mode from January through May. This mode of operation internally recycles cooling water from units 1,2 and 3 to be used in Unit 4. The result is a higher level of thermal discharge than the traditional open cycle mode, but a reduction in flow. This reduction in flow is seen as reducing entrainment and impingement of winter flounder and anadromous fish life stages.

Sediment deposition modeling

The proponent has developed a model to predict sediment deposition from the dredging project and attempted to use this model to predict impacts to aquatic organisms. The modeling exercise consisted of several steps: application of a hydrodynamic model to predict how water moves within Mount Hope Bay and the Taunton River; a physical model that moves the sediment particles; and a biological interpretation of critical thresholds that will elicit an effect in organisms of interest. This modeling exercise was partially conducted to justify the position that dredge windows (time of year restrictions) are not necessary to minimize impacts to aquatic organisms.

The hydrodynamic model was an existing model that had been originally developed and calibrated for use in predicting the thermal plume from Brayton Point Station. This model was reviewed and ultimately accepted by federal and state resource agencies. The physical model used to predict particle movement was the SSFATE model, which is also an EPA approved model. While we do not have any significant concerns on how either of these models operate, we have expressed concerns, most recently during an interagency meeting on October 8, 2004 hosted by the Corps of Engineers, about some of the inputs chosen by the applicant for the model simulations. Specifically, we continue to disagree with a number of inputs to the SSFATE model including: the loss rates of sediments from the dredge bucket, the egg incubation times for winter flounder, and assumed spawning depth of winter flounder. Further information on this issue may also be found in comment letters submitted in response to the DEIS/DEIR by the MADMF and NMFS. We believe that inappropriate inputs to the SSFATE model result in outputs which underestimate the effects of suspended sediments on the resources of the Taunton River, including winter flounder, anadromous fish and shellfish.

The most significant shortcoming with the modeling effort in our view is the biological interpretation of model generated output. One critical question is the effect of the proposed dredging on winter flounder spawning, egg survival and larval development. The applicant's model produced sediment deposition rates over a projected area and inferred impacts based on a burial depth of ½ the diameter of a typical flounder egg. This value was chosen after some brief conversations between the applicant and several scientists who have conducted some limited studies on this topic. EPA contacted these scientists and discovered that the ½ egg diameter endpoint is not an appropriate target for several reasons:

1. This value was recommended from a published study by Morgan et al. (1983), which examined the effect of sediments on striped bass and white perch eggs. Both of these species have a much shorter time to hatching (2-3 days) than winter flounder (21 days or more). Thus, concentrations that would elicit a reduced hatching rate after a 24-48 hour exposure time in striped bass and white perch, might elicit an even greater effect in winter flounder due to the substantially longer exposure time.

2. The applicant uses a value from Morgan et al.(1983) that represents an effect level (reduced hatching rate) as their target. We believe the analysis should have examined the

sediment deposition rates that produced a no-effects result. Additionally, Morgan et al. (1983) looked exclusively at hatching rate, but did not consider viability of the larvae immediately after hatch. Dave Nelson of NMFS, who has conducted experiments on the effect of sediment deposition on winter flounder eggs, reports that larvae hatched, but exhibited structural deformities and could only swim in circles, greatly reducing their chance of survival (Dave Nelson, personal communication). Thus, we believe the use of egg hatching rate is not the most sensitive way to assess the impacts of sediment deposition on winter flounder egg and larval survival and development. Moreover, EPA acknowledges that there is a paucity of peer-reviewed information to draw upon in assessing the impacts of sediment deposition on fish egg hatching and resulting larval viability. This lack of information is a critical weakness in this impact modeling effort.

As this time, we do not concur with either the inputs to the model, nor the resulting biological implications. We maintain that the impact to biological resources from suspended sediment generated by the proposed dredging has been significantly underestimated. Thus, the applicant has not provided acceptable justification that impacts to winter flounder eggs/juveniles, anadromous fish, and shellfish will be fully avoided. Should this project move forward in any fashion, seasonal work windows must be utilized to protect these organisms, as recommended by MADMF.

Entrainment/impingement

The SDEIR attempts to minimize the significance of the impact of entrainment and impingement by comparing volumes of ballast water taken by LNG ships to the volume of water in the river and comparing adult equivalent fish numbers to commercial catch numbers of those same species. Due to the proximity of this activity to the spawning habitat and the current status of the resource in the lower Taunton River and Mount Hope Bay, and the ongoing efforts to reduce impacts from other sources, EPA is still concerned with this potential source of impact to aquatic resources in Mount Hope Bay. Mitigation should be developed to address this impact when viewed either singly or cumulatively with other impacts of this project and other stressors in the ecosystem. Furthermore, this is an impact for which no mitigation has been proposed. We recommend that state of the art measures, such as fine mesh screens (such as are being proposed for the upstream desalinization plant in Swansea) or the use of gray water from Fall River in lieu of river water be studied and the results made available for agency and public consideration.

Invasive Species

The SDEIR states that because there will be no discharge of ballast water, invasive species are not a threat. This is an overly simplistic analysis of the issue. Research has shown that ballast water is but one of many ways that invasive species may be transported to new locations. Research is now showing that susceptibility of the water body may play an important role in determining

whether an invasion can occur (Stachowicz et al., 2002)[3]. There can be no doubt that the current level of degradation in Mount Hope Bay makes it a vulnerable system. Our comments on the DEIS/DEIR requested an analysis of the risk posed by invasive species from the LNG vessels to the water bodies of the various site alternatives. The SDEIR does not address this request.

Cumulative Impacts

The SDEIR attempts to minimize the significance of the project impacts by comparing it to other stressors within the Mount Hope Bay system. We believe that the more appropriate and relevant approach to cumulative impacts has been to look at the variety of stressors on a specific organism or water body and attempt to determine if the additive or synergistic effects of multiple stressors results in significant impacts to that aquatic organism. EPA has already determined, based on the available fishery data, that fish populations have collapsed in Mount Hope Bay. Based on that data, it has become apparent that fishing restrictions, which have been in place for over 10 years, are not sufficient by themselves to restore fish populations in Mount Hope Bay. As a result, we have aggressively attempted to reduce or eliminate other stressors on Mount Hope Bay water quality and fish populations. The City of Fall River has made major strides in reducing CSOs and we are attempting to dramatically reduce the impact of Brayton Point Station on Mount Hope Bay. If Brayton Point Station's final permit is implemented, the station will intake 20 billion gallons of river water a year. Consequently, at 1 billion gallons a year the ballast water withdrawal from LNG ships represents a more significant portion of the total entrainment impact.

EPA New England, in conjunction with other state and federal resource agencies, has worked to dramatically reduce cumulative impacts on fish populations in Mount Hope Bay. These efforts have been most aggressively pursued in the context of winter flounder. The proposed project would result in impacts to winter flounder by permanently eliminating 12 acres of spawning habitat, impacts to some undefined area of spawning habitat from sediment deposition for dredging (although not continuous) over a period of at least three years and the entrainment and impingement of eggs, larvae and juvenile fish during operation of the LNG facility. In an ecosystem as stressed as Mount Hope Bay, these additional impacts to winter flounder spawning habitat and early life stages are could substantially hinder recovery of the population with fidelity to the Taunton River.

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[3]Stachowicz, J.J., H. Fried, R.W. Osman and R.B. Whitlach. 2002. Biodiversity, Invasion Resistance and Marine Ecosystem Function: Reconciling Pattern and Process. Ecology, 83(9), 2575-2590.

Minimization and mitigation

The project proponent has proposed a minimization and mitigation package to offset impacts from dredging that includes[4]:

1. Use of a closed "environmental" bucket for all dredging of depositional sediments;

2. Implementation of a TOY restriction (to protect winter flounder spawning) for dredging in the turning basin during February, March and April. The SDEIR also indicates a willingness to consider a similar restriction for the area north of the Braga Bridge and south of the turning basin;

3. To minimize impacts to anadromous fish the dredge would work in a line parallel to the river current from March through July;

4. Salt marsh restoration: location and specifics to be worked out in the future, to offset the permanent loss of winter flounder spawning habitat (12 acres);

5. Shellfish relay: Removal of the quahogs within the dredge footprint by commercial fishermen with the intention of relaying them to another location;

6. Shellfish seeding: A one time reseeding of the lower Taunton River with quahog spat after completion of the dredging.

7. Appropriate monitoring and reporting

EPA does not believe that the proposed mitigation will sufficiently offset the expected environmental impacts associated with this project. Specifically, though salt marsh restoration is always a positive thing to accomplish, it will not replace lost winter flounder spawning habitat nor will it have an effect on improving winter flounder spawning in Mount Hope Bay. Our DEIS/DEIR comment letter provided additional details on our view of the shellfish relay and seeding.

In addition, other impacts that are not compensated for include disturbances associated with the pipeline crossing of the Taunton River, and, as discussed above, the entrainment and impingement associated with ballast water use. In addition, treatment options are not discussed to demonstrate how water quality standards and discharge criteria would be met for the project.
As stated above, EPA believes that Mount Hope Bay and the Taunton River serves as an

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[4]We note that the applicant has performed additional Tier III testing to determine whether a percentage of the dredged material may be suitable for offshore disposal. The results of that analysis will help to determine whether any of the proposed dredging impacts to the Taunton River ecosystem can be further minimized by shortening the time required to dredge.

important ecosystem for a number of aquatic organisms including, winter flounder, anadromous fish and shellfish. While comparisons between the proposed project and projects in Narragansett Bay have been made in the SDEIR, we believe that the similarities are limited and that more protective measures are necessary to protect and continue to improve conditions for organisms and habitats within the Taunton River/Mount Hope Bay complex.

Air Quality Issues

Comments on General Conformity

In April 2004, EPA designated eastern Massachusetts as a moderate ozone nonattainment area under the 8-hour ozone standard and, after June 15, 2005, the ozone conformity applicability thresholds for this area will be 50 tons per year of VOCs or 100 tons per year of NOx emissions. The maximum estimated emissions of NOx and VOCs from the Weaver's Cove LNG Facility are under these thresholds and the facility is not expected to be in service until well after June 15, 2005. Therefore, if the FEIS is issued before June 15, 2005, we think it is appropriate for FERC to postpone the effectiveness of its general conformity determination until June 15, 2005 or later. In this case, general conformity is satisfied by yearly emissions below the applicability threshold for the life of the proposed Weaver's Cove LNG Facility.

New Source Review

We previously commented that under the Massachusetts Department of Environmental Protection's (DEP) definition of "building, structure, facility and installation" in 310 CMR 7.00, Appendix A, a marine vessel is part of a facility while docked at the facility. We also noted that emissions data included in the Weaver's Cove application indicate that the emissions from the vessels docked at the proposed facility combined with the emissions from onshore emission units would exceed the DEP's major nonattainment New Source Review (NSR) threshold levels. In response, the applicant agreed that the emissions from the vessels docked at the facility should be included for determining NSR applicability. However, the applicant clarified that only the LNG tankers dock at the facility and not the tugs. Therefore, only the emissions from the tankers should be included in any NSR applicability determination. The applicant calculated that the NOx emissions from the tankers (while docked) and the onshore emission units do not exceed the major NSR threshold levels.

Based upon the information presented, EPA concurs with the applicant's conclusion that the facility is not subject to the DEP's major NSR rules. However, EPA notes that the DEP's plan approval for the facility will include a 46.9 TPY facility-wide cap. This is relatively close to the DEP's major NSR threshold level of 50 TPY. Therefore, we recommend that the applicant work closely with the DEP to ensure the emissions estimates for the LNG tanker are accurate and do not exceed the NSR threshold levels. In addition, the state's 310 CMR 7.02 plan approval regulations require facility-wide caps used to avoid major source status to be federally enforceable. To fulfill this requirement, the applicant must work closely with DEP to develop practically enforceable

requirements beyond a simple tons-per-year cap. The cap must include short-term emission limits or operational restrictions with appropriate monitoring, recordkeeping, and reporting for all emission units, including the LNG tankers while docked, to ensure that DEP, EPA, and the public can effectively enforce the facility-wide cap.

Environmental Justice

Our comments on the DEIS/DEIR recommended a more comprehensive analysis of the impacts of the proposed project along with the other environmental and public health impacts caused by other facilities and activities that exist within the area. Specifically, we noted that an analysis of the total health impacts on sensitive receptors, such as children with asthma, in the area would serve as an adequate surrogate for examination of disproportionate impacts from an air quality perspective.

The SDEIR notes that, "Weaver's Cove has conducted extensive studies on the potential effects, including human health, economic and social effects, that the proposed project might have on minority and low-income populations....which were included in Resource Report 5 with Weaver's Cove's Application...". Resource Report 5, Section 5.2.3.1 describes health care services in the area, i.e., the number of hospitals and long-term care facilities, but there is no discussion of the health status of the residents in the affected communities, including asthma prevalence, or potential health impacts associated with the construction and operation of the LNG facility. We note the Weaver's Cove commitment to follow the Massachusetts Diesel Retrofit Program for large construction vehicles that will be permanently assigned to the project–one that would include the installation of oxidation catalysts and particulate filters on the construction vehicles. Although Resource Report 5, Section 5.4 notes that modeled impacts from significant emission sources associated with the project do not exceed the National Ambient Air Quality Standards, it may be prudent for Weaver's Cove to analyze the cumulative effect of these emissions, as well as the vehicle exhaust emissions projected during construction and operation of the facility, on the health of residents in the surrounding communities and propose actions to mitigate any additional burdens to at-risk populations. Again, we refer you to a study of school-based asthma surveillance in Massachusetts located at www.asthmaregionalcouncil.org, as a starting point for your analysis of potential health impacts of the project on the surrounding communities.

PEOPLE FOR NARRAGANSETT BAY
SAVE THE BAY

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FAX cover sheet

date 9/20/04

to Ted Lento USACOE

from John Torgan

fax # (978) 318-8303 # of pages 9 including this page

note Save The Bay Comments to the Corps on Weaver's Cove LNG DEIS

Mr. Ted Lento
US Army Corps of Engineers
New England District
696 Virginia Road
Concord, MA 01742-2751

Via Electronic Filing

September 20, 2004

Re: Comments on Weaver's Cove Energy L.L.C and Mill River Pipeline L.L.C.
File Number; 2004-2355

Dear Mr. Lento:

Below, please find the comments of Save The Bay on the proposed Weaver Cove Energy LNG terminal facility in Fall River, Massachusetts. These comments are in response to the Draft Environmental Impact Statement (DEIS) of the Federal Energy Regulatory Commission (FERC), and are specifically directed to the Corps with respect to your role in the project permitting and review. Thank you for your consideration of these comments.

Interests of Save The Bay

Save the Bay, Narragansett Bay, Inc., a nonprofit organization with approximately 20,000 members and supporters, submits the following comments in objection to Weaver's Cove proposed LNG Facility in Fall River, Massachusetts. Save The Bay has a unique and direct interest in Mount Hope Bay, the Taunton River and its watershed as integral parts of Narragansett Bay. The mission of Save The Bay is to protect Narragansett Bay and its tributaries from the harmful effects of human activity. Save The Bay members and supporters use Mount Hope Bay, the Taunton River and all of Narragansett Bay for recreational purposes including swimming and fishing. Some members of Save The Bay own property on and near these valuable waters. In addition, Save The Bay considers the protection and restoration of the Taunton River watershed as a priority for the organization. The natural

hydrology creates a uniquely valuable estuary, and it is home to 69 state-listed threatened or endangered species. It is important as a nursery area for fish and is designated as essential fish habitat for 14 federally-managed species. It provides the largest anadromous fish runs in the Narragansett Bay watershed.

Save The Bay objects to the proposed Weaver's Cove LNG facility based on its expected environmental impacts. The facility will impact the interests of Save The Bay because the construction and operation of the facility will have direct and significant environmental impacts to Mount Hope Bay, the Taunton River and its watershed and to the public use of coastal resources.

Position of Save The Bay on the DEIS and Explanation

Save The Bay objects to and opposes this project, as proposed in the Draft Environmental Impact Statement, based on the large-scale and permanent environmental impacts that would be caused by the construction and operations of this facility. We are most concerned about the unacceptable impacts of dredging between 2.6 and 3.1 million cubic yards of sediment, some too contaminated for open-water disposal, from the lower Taunton River.

The DEIS is inadequate in that it fails to consider a number of alternatives that may be practicable and less environmentally damaging than the preferred alternative. Despite the expected economic and environmental benefits of LNG as a fuel source, Save The Bay fundamentally disagrees with FERC's conclusion that the expected adverse project impacts will be limited. To the contrary, the potential impacts to fish and fish habitat are likely underestimated in the DEIS, and may be long-term or permanent.

The Taunton River estuary is unique. It is the only river of its kind in this region of the world. Over its forty-mile course, there are no dams. This natural hydrology creates a classic estuary, where fresh water floats on salt water in a wedge moving with the tide. It is home to 69 state-listed threatened or endangered species, and boasts the highest freshwater mussel diversity in Massachusetts. This system is particularly important as a nursery area for fish, and is designated as essential fish habitat for 14 federally-managed species including windowpane flounder, winter flounder, red hake, Atlantic mackerel, black sea bass, bluefish, scup, Atlantic herring, scup and summer flounder. It provides the largest anadromous fish runs (herring and

alewives) in the Narragansett Bay watershed, with populations of more than 1 million fish.

In the proposed dredged channel and turning basin, the project would permanently impact 191 acres of river bottom. This includes 144 acres of relatively shallow habitat specifically identified as spawning beds for winter flounder. It would affect 84 acres of quahog habitat. Deepening this segment of the Lower Taunton from its natural, existing depth, would change the benthic habitat and thus represents a permanent impact.

The dredging plan, to dredge continually with open-bucket dredges and scows that allow overspill, represents a much less protective approach than is presently being employed in the Providence River and Harbor project. This plan essentially ignores the environmental windows generally imposed by state and federal agencies to protect sensitive living resources during spawning and migration. A more realistic approach that observes standard safeguards and windows may take 5 years or longer to complete this project, resulting in extended project impacts during construction.

The dredged disposal plan identified in the DEIS, to pile up the sediments on-site, may not be feasible due to the impacts of polluted sediment runoff potentially causing water quality standards violations in the river. While upland disposal is usually preferable, the applicant has not identified any alternatives for this critical component of the project, should upland disposal become infeasible. The DEIS is unclear with respect to the specific sediment contamination data, and the contamination levels will be determinative to the disposal options and costs. Save The Bay believes a supplemental draft EIS is necessary to examine the dredging and dredged disposal issues in adequate detail.

Save The Bay believes a number of project alternatives, reviewed and summarily dismissed in the DEIS, represent potentially less-damaging and safer ways to meet the project purpose than the preferred alternative. The remote, or "offshore" alternative would be less-damaging in that it would not require dredging and dredged disposal. For the same reasons, the offshore alternative might be permitted and built years ahead of the preferred alternative. This and other alternatives could properly be addressed through a draft supplemental EIS. Save The Bay supports the calls of the Rhode Island Congressional Delegation for a regional analysis of alternatives. Allowing the piecemeal destruction of the environment to accommodate the first project

filed is an irresponsible way to manage our natural resources and violates NEPA.

In summary, the draft EIS is inadequate in that it does not meet the requirements of NEPA or MEPA:

(1) It failed to identify and assess potential impacts on the natural environment from the proposed dredging and dredge disposal

(2) It failed to address cumulative impacts from the project on Mount Hope Bay, considering the impacts from Brayton Point Power Station on winter flounder (or the ecosystem)

(3) It failed to identify alternative routes for the pipeline and provide an opportunity for the public to review and comment on avoidance, mitigation and alternatives.

(4) It failed to adequately explore viable alternatives and summarily dismissed "offshore" alternatives.

(5) It failed to determine, or even review, whether the project is consistent with MA and RI CZMA. Such a determination should be made before it is permitted, not before construction.

(6) It failed to describe the potential environmental impacts on MA resources and show that all feasible means to avoid damage to the environment will be implemented. The state does not have adequate information to make permitting decisions

Alternatives

The purpose of the project is to serve natural gas needs of New England market, particularly southeastern MA and RI, and all practicable alternatives in the region should be evaluated fairly. The review of alternative sites and methods of delivering gas to the region should not be limited to those projects already filed with FERC.

NEPA requires the applicant to rigorously explore all and evaluate all reasonable alternatives and, for those that were eliminated from consideration, to explain why. The dismissal of the Northeast Gateway Project off of Gloucester, MA lacks adequate explanation. This and other remote sites, both offshore and on land, would likely have less overall environmental impact. FERC and the Corps must consider the economic impacts of the lost habitat and other environmental impacts in its determination of

whether the project is in the public interest. Such natural resource values and damages would certainly be significant in this case, and are not included in this analysis.

Alternatives to the preferred dredging plan in the DEIS have not been identified. These should include consideration of alternative dredged disposal sites along with appropriate evaluations. The analysis of dredging alternatives should also include contingencies for the requirement of dredging windows, the use of closed-bucket dredges, the requirement for "overdredging" volume to ensure consistently adequate channel depth, and the additional volumes of sediments and time periods associated with these restrictions. The DEIS assumes that these kinds of restrictions will be waived for this project, and presents an unrealistic and overly optimistic construction schedule. A longer duration for the project construction would result in extended and repeated environmental impacts through the dredging and dredged disposal processes.

While the DEIS suggests that maintenance of the authorized Federal channel north of the Braga Bridge is the Corps of Engineers' responsibility, and suggests that this project would privately finance these public works, this is misleading. No other public or private entity would benefit from this area of proposed dredging and it is unlikely that this portion of the channel would ever be dredged again as a Federal project. In addition, the deepening proposed for the turning basin represents a new deepening project and a new impact on the benthic community of the Taunton River.

Wetlands

Careful consideration must be given to wetlands. The ACOE is obligated to recognize that "[m]ost wetlands constitute a productive and valuable public resource, the unnecessary alteration or destruction of which should be discouraged as contrary to the public interest." 33 CFR § 320.4(b)(1). Although the alteration of a certain wetland may be a minor change, "the cumulative effect of numerous piecemeal changes can result in a major impairment of wetland resources." 33 CFR §320.4(b)(3). Therefore, the ACOE must recognize that the piecemeal changes may impact an interrelated wetland area. Id.

The draft EIS is inadequate in that it failed to identify and assess potential impacts on the natural and human environment that would result from implementation of the proposed actions. Prior to determining whether the project is in the public interest a

thorough environmental review must be conducted. There is neither adequate nor specific information on many issues related to the wetland impacts, including impacts to functions and values and cumulative losses. An evaluation of the complete and interrelated wetland area, considering the cumulative effect of numerous piecemeal changes, must be conducted. If impacts can not be avoided, there must be an appropriate compensatory mitigation plan. These issues must be addressed in a supplemental draft EIS that provides the public with the information and opportunity to review and comment on the issues.

Cumulative Impacts

Cumulative impact is defined as the "impact on the environment which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency undertakes such other actions." When considering the environmental impacts of this project, FERC should consider the extensive damaged caused to the receiving waters of the Lower Taunton River and Mount Hope Bay by the Brayton Point Power plant, treated sewage discharge from the Fall River Wastewater Treatment Facility, combined sewer overflows, impacts of the Montaup power plant, and impacts of nutrient pollution from a wide range of sources. The additional, cumulative impact of the proposed LNG facility could have synergistic impacts on a precariously balanced ecosystem.

Responsibilities of the ACOE

In reviewing this application for an individual permit The Army Corps of Engineers (ACOE) the District Engineer must conduct a case-by-case evaluation of the dredging, and other work to be conducted, and determine that the proposed work is in the public interest. 33 CFR §322.2(e). The ACOE must conduct a "public interest review" and determine whether it will permit the operation and construction of Weaver Cove Mill River Pipeline. 33 CFR §320.1 In conducting this review the agency is obligated to consider the public interest by contemplating both protection and utilization of important resources.

In balancing the probable impacts of the proposed project the ACOE must consider a number of factors including the cumulative effects. 33 CFR §320.4 (a)(1). Specifically, the ACOE deliberations must include; conservation, aesthetics, general environmental concerns, wetlands, fish and wildlife values, land use, navigation, shore erosion and accretion, recreation, water

quality, energy needs, safety, considerations of property ownership and, in general, the needs and welfare of the people. Id. In the evaluation of every application where there are conflicts as to resource use the ACOE must consider the practicability of "using reasonable alternative locations and methods to accomplish the objective of the proposed structure or work;". 33 CFR §320.4 (a)(2)(ii).

The District Engineer must give full consideration to the opinion of the agencies it must consult with including "the Regional Director, U.S. Fish and Wildlife Service, National Marine Fisheries Service, and the head of the agency responsible for fish and wildlife for the state in which work is to be performed, with a view to the conservation of wildlife resources by prevention of their direct and indirect loss and damage due to the activity proposed in a permit application." 33 CFR § 320.4(c). A determination on water quality is properly left to the states 33 CFR §320.4(d) and "[f]ull evaluation of the general public interest requires that due consideration be given to the effect which the proposed structure or activity may have on values such as those associated with wild and scenic rivers, estuarine and marine sanctuaries." 33 CFR § 320.4(e). The ACOE review must recognize the pending designation of the Taunton River as a Wild and Scenic River. Id. As both the states of Rhode Island and Massachusetts have approved coastal zone management programs Weaver Cove Energy must obtain a certification that the proposed activity complies with both coastal zone management programs. 33 CFR § 320.4(h). An important aspect of the balancing factors in determining the public interest "includes avoiding, minimizing, rectifying, reducing, or compensating for resources losses." 33 CFR § 240.4(r). The applicant has not avoided or minimized resources losses and little to no compensation has been offered to address losses. Weaver Cove has not supplied sufficient information to address cumulative impacts from the dredging, dredged disposal, construction of the pipeline, wetlands, or the synergistic effects of these activities with other existing impacts to the Lower Taunton River or Mount Hope Bay.

Conclusion

Save The Bay vehemently disagrees with FERC's finding that the project would result in limited adverse environmental impacts if implemented with certain stipulations and mitigation measures. Such a conclusion is not supported by the discussion of project impacts in the DEIS. Save The Bay believes the impact of constructions and operations, dredging and dredged disposal, pipeline route, the filling of salt marsh and wetlands, and other

direct environmental impacts of this project will be significant and unacceptable.

The issues and concerns of Save The Bay outlined in these comments have not yet received adequate public input and inter-agency review. A supplemental draft EIS would provide the opportunity to revisit these crucial issues and address the numerous gaps in information necessary to determine project impacts.

Thank you for your consideration of our comments.

Sincerely,

John B. Torgan
Narragansett BayKeeper

NAT - 2004-207 (Valiton)

City of Fall River
Massachusetts
Executive Department

Edward M. Lambert, Jr.
Mayor

One Government Center
Fall River, MA 02722
Tel. (508) 324-2600
Fax (508) 324-2626
(508) 324-2000 Voice/TDD

August 9, 2004

Mr. Peter Colosi
Assistant Regional Administrator for Habitat Conservation
NOAA Fisheries, Northeast Region
One Blackburn Drive
Gloucester, MA 01930

RE: Weaver's Cove Energy, LLC – Essential Fish Habitat Determination

Dear Mr. Colosi:

I am writing on behalf of the City of Fall River, MA, following the issuance on July 30, 2004 of the DEIS by the Federal Energy Regulatory Commission (FERC) concerning the above project. We request, prior to NOAA Fisheries taking any position concerning the comments and concerns raised by NOAA Fisheries and the FERC's assumptions and conclusions about the lack of significant impacts upon EFH, that we be afforded an opportunity to meet with you and your staff.

The public comment period for the DEIS runs through September 20, 2004 and two public hearings have been scheduled for September 8th and September 9th. Therefore, there is no need for NOAA Fisheries to expedite its considerations of the FERC's assumptions and conclusions, which deviate significantly from the conclusions proffered by NOAA Fisheries, the United States Environmental Protection Agency – Region 1 (EPA), and the Massachusetts Division of Marine Fisheries.

We recently met with representatives from EPA Region 1 to discuss a series of issues, including information sharing with the cooperating federal agencies, as part of an overall, coordinated strategy for reviewing and responding to the DEIS. We very much believe that NOAA Fisheries is integral to this process, given the significant and potentially permanent, adverse impacts upon EFH that could result from this project.

We would also point out, as we did to EPA, that this DEIS represents the first project to be implemented in New England under the FERC's accelerated "pre-NEPA filing process," which decreases the period for cooperating agency reviews by 6 – 8 months when compared to traditional NEPA review. The manner in which the FERC addresses the concerns and conclusions of cooperating agencies and other interested parties in this filing will set a precedent in this region for all future, expedited NEPA reviews.

We therefore request that NOAA Fisheries, prior to adopting any substantive or procedural posture relative to the DEIS, schedule a meeting with representatives from the City of Fall River to discuss this matter.

Sincerely,

Edward M. Lambert, Jr.
Mayor

Cc:

Brian Valiton, Regulatory Permits
United States Army Corps of Engineers, New England District
696 Virginia Road
Concord, MA 01742-2751

Betsy Higgins
United States Environmental Protection Agency, Region 1
Mail Code RAA
One Congress Street, Suite 1100
Boston, MA 02114

Paul Diodati
Massachusetts Division of Marine Fisheries
251 Causeway Street, Suite 400
Boston, MA 02114

Alex Strysky
Massachusetts Office of Coastal Zone Management
251 Causeway Street, Suite 900
Boston, MA 02114

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

OFFICE OF ENERGY PROJECTS

In Reply Refer To:
OEP/DG2E/Gas 1
Weaver's Cove Energy, L.L.C. and
Mill River Pipeline, L.L.C.
FERC Docket Nos. CP04-36-000 and
CP04-41-000

July 30, 2004

Mr. Peter Colosi
Assistant Regional Administrator for Habitat Conservation
NOAA Fisheries, Northeast Region
One Blackburn Drive
Gloucester, MA 01930

Re: Weaver's Cove Energy Project--Essential Fish Habitat Determination

Dear Mr. Colosi:

As required by the Magnuson-Stevens Fishery Conservation and Management Act, I am requesting an Essential Fish Habitat (EFH) consultation with your office. Weaver's Cove Energy, L.L.C. and Mill River Pipeline, L.L.C. (collectively referred to as Weaver's Cove Energy) have applied to the Federal Energy Regulatory Commission (FERC) for authorizations to construct a liquefied natural gas import terminal and natural gas pipeline facilities in Bristol County, Massachusetts. The FERC has prepared a draft environmental impact statement (EIS) for the Weaver's Cove LNG Project (see enclosure).

NOAA Fisheries identified EFH for 13 species in the vicinity of the Weaver's Cove LNG Project. Our EFH Assessment (included in section 4.6.2 of the enclosed draft EIS) evaluates the proposed action's potential effects on these federally managed species and their EFH.

In the preparation of the EFH assessment, FERC staff has considered comments from NOAA Fisheries presented at agency meetings on December 9, 2003 and March 9, 2004; comments filed with the FERC on September 26, 2003 and January 27, 2003; and those included in informal correspondence generated during the cooperative preparation of the draft EIS.

We have determined that the Weaver's Cove LNG Project would not have a substantial adverse effect on managed fisheries or their designated EFH and that the proposed project complies with the intent and degree of protection afforded to EFH under the Magnuson-Stevens Fishery Conservation and Management Act. Our conclusion is based, in part, on Weaver's Cove Energy's modeling results, measures proposed by Weaver's Cove Energy that would reduce impacts to winter flounder (refer to page 4-77 of the draft EIS), as well as our recommendation on the same page.

As noted in the draft EIS, conservation recommendations submitted by NOAA Fisheries in the EFH consultation will be addressed in the final EIS. For any comments NOAA Fisheries has apart from the EFH consultation, please refer to the cover letter included in the document for submittal instructions.

Finally, we would like to thank NOAA Fisheries for its continuing input as a federal cooperating agency in the preparation of the draft EIS. Should you have any questions regarding the Weaver's Cove LNG Project review, please contact me or Rich McGuire, environmental project manager, at (202) 502-6177.

Sincerely,

Michael J. Boyle, Chief
Environmental Gas Branch I

Enclosure

cc: Public File, Docket Nos. CP04-36-000 and CP04-41-000 (w/o Enclosure)

Chris Boelke
NOAA Fisheries, Northeast Region
One Blackburn Drive
Gloucester, MA 01930

Mike Ludwig
NOAA Fisheries, Milford Laboratory
212 Rogers Avenue
Milford, CT 06460-6499

Edward M. Lambert, Jr.
Mayor

City of Fall River
Massachusetts
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August 9, 2004

Mr. Jamie Fosburgh
U.S. Department of the Interior
National Park Service
15 State Street
Boston, MA 02109

RE: Weaver's Cove Energy, LLC – Draft Environmental Impact Statement for the Weaver's Cove LNG Project

Dear Mr. Fosburgh:

I am writing on behalf of the City of Fall River, MA, following the issuance on July 30, 2004 of the DEIS by the Federal Energy Regulatory Commission (FERC) concerning the above project. We request, prior to the U.S. Department of the Interior taking any position concerning the comments and concerns raised by the Department of the Interior and the FERC's assumptions and conclusions about the lack of significant impacts upon the Taunton River as it relates to its potential designation as a Wild and Scenic River, that we be afforded an opportunity to meet with you and your staff.

The public comment period for the DEIS runs through September 20, 2004 and two public hearings have been scheduled for September 8th and September 9th. Therefore, there is no need for the Department of the Interior to expedite its considerations of the FERC's assumptions and conclusions, which may deviate significantly from and not adequately address concerns that the Department expressed in previous correspondence to the FERC.

We recently met with representatives from EPA Region 1 to discuss a series of issues, including information sharing with the cooperating federal agencies, as part of an overall, coordinated strategy for reviewing and responding to the DEIS. We very much believe that the Department of the Interior is integral to this process, given the significant and potentially permanent, adverse impacts that could result from this project upon the Taunton River, a potential Wild & Scenic River.

We would also point out, as we did to EPA, that this DEIS represents the first project to be implemented in New England under the FERC's accelerated "pre-NEPA filing process," which decreases the period for cooperating agency reviews by 6 – 8 months when compared to traditional NEPA review. The manner in which the FERC addresses the concerns and conclusions of cooperating agencies and other interested parties in this filing will set a precedent in this region for all future, expedited NEPA reviews.

We therefore request that the Department of the Interior, prior to adopting any substantive or procedural posture relative to the DEIS, schedule a meeting with representatives from the City of Fall River to discuss this matter.

Sincerely,

Edward M. Lambert, Jr.
Mayor

Cc:

Brian Valiton, Regulatory Permits
United States Army Corps of Engineers, New England District
696 Virginia Road
Concord, MA 01742-2751

Betsy Higgins
United States Environmental Protection Agency, Region 1
Mail Code RAA
One Congress Street, Suite 1100
Boston, MA 02114

Paul Diodati
Massachusetts Division of Marine Fisheries
251 Causeway Street, Suite 400
Boston, MA 02114

Alex Strysky
Massachusetts Office of Coastal Zone Management
251 Causeway Street, Suite 900
Boston, MA 02114

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO
ATTENTION OF

September 17, 2004

Regulatory Branch
CENAE-R-2004-2355

Secretary Magalie R. Salas
Federal Energy Regulatory Commission
888 First Street, NE Room 1A
Washington, DC 20426

RE: Weaver's Cove Energy LLC and Mill River Pipeline, LLC, Fall River, Freetown, Somerset, & Swansea, Massachusetts. FERC Dockets CP04-36 & CP04-41.

Dear Secretary Salas:

We are providing the following comments as a cooperating agency participating in the review of the Environmental Impact Statement for the proposed Weavers Cove Energy (WCE) and Mill River Pipeline project.

1. The draft Environmental Impact Statement (EIS) indicates one of the dredge disposal options is to transport the dredged material for ocean disposal. Once we have completed our review of the sediment sampling plan data that we expect will be provided within the next few months by WCE staff then we will make a determination as to the suitability of the material for ocean disposal. Dredging with ocean disposal could include time of year restrictions on in-water work that may minimize adverse impacts to essential fish habitat and for this reason it may be selected by our office as the preferred disposal method. We recommend that the EIS include the results of the sediment sampling and our determination on the preferred method of dredged material disposal.

2. The option of dredging with upland disposal is currently WCE's preferred method, however the processing of the dredged material to be placed on upland areas will require that dredging activities occur non stop without any time of year restrictions in order to complete the project by 2007. We understand that the Massachusetts Highway Department (MHD) has announced the Brightman Street Bridge removal may not be completed until the 2009-2010 time frame. In this event, several additional years would be available to complete the dredging with upland disposal and therefore time of year restrictions on in-water work may be practicable. Since the MHD bridge removal schedule is an important factor in our determination on dredge material disposal options, a more definitive schedule should be included in the EIS.

3. The EIS should include a dredging option that evaluates upland disposal and incorporates fisheries windows. Information should be provided on the affect of this option on the project schedule, particularly in light of the MHD announcement of the 2009-2010 time frame for removing the Brightman Street Bridge that would act as an obstruction to the LNG tanker.

4. The EIS should more fully describe and evaluate an off-shore LNG alternative with the characteristics of the Excelerate Energy LLC's proposed Northeast Gateway Project to construct an offshore LNG facility southeast of Gloucester, Massachusetts.

5. The need for an alternative that provides both a storage component as well as LNG truck delivery to other LNG storage facilities should be expanded in the project purpose section of the EIS. This would aid in our determination of the least environmentally damaging practicable alternative that satisfies the basic project purpose.

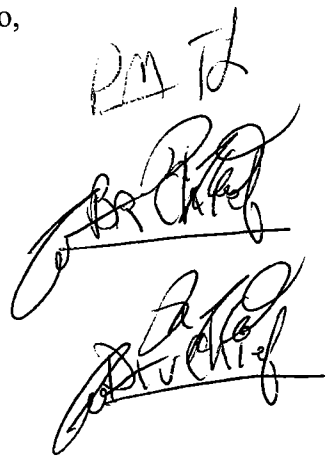
6. Our permit review will include the evaluation of several public interest factors, including safety and traffic impacts. Therefore, we recommend the EIS include the U.S. Coast Guard determination on the need for bridge closings as well as the safety concerns associated with LNG tankers transiting Narragansett Bay and Mount Hope Bay. If bridge closing are required, then the associated impacts on traffic should be provided. This information is required in order for the EIS to be a complete document that can be relied upon to provide the information necessary for our permit review.

7. The draft EIS raised issues that require further coordination with various Federal and State Agencies in order to provide sufficient information to determine the project's compliance with the Endangered Species Act, the National Historic Preservation Act and the Wild and Scenic Rivers Act. Since a Corps permit cannot be issued until we have determined the proposed work in our jurisdiction complies with these Acts, we therefore recommend that the EIS contain this determination along with sufficient information for our office to concur.

We look forward to continued consultation with your office concerning this project. If you have any questions or comments concerning this matter, please contact Ted Lento, Regulatory Division Project Manager, at 978 318-8863.

Sincerely,

Christine Godfrey
Chief, Regulatory Division



TOWN OF BRISTOL, RHODE ISLAND

September 17, 2004

Council Clerk
Diane C. Mederos

Ms. Crystal I. Gardner
Chief, Permits & Enforcement Branch
Regulatory Division
United States Army Corps of Engineers
New England District
696 Virginia Road
Concord, MA 01742-2751

Re: Weaver's Cove Energy, LLC & Mill River Pipeline, LLC File #: 2004-2355 -Lento

Dear Ms. Gardner:

At the town council meeting of September 15, 2004, the council voted unanimously to send a letter to the US Army Corps of Engineers voicing their opposition to the prospect of dredging or the consideration of dredging Mt. Hope Bay until there is a public hearing held in Bristol on this serious matter.

The council heard testimony from Representative Raymond Gallison that on September 8th at the Federal Energy Regulatory Commission hearing on the above referenced application, residents learned for the first time that that hearing would serve as your agency's hearing for the dredging permits. There is a real fear that dredging the channel will adversely affect the commercial fishing industry and recreational boating that thrives in our area, and we feel that they have a right to be heard to express their concerns.

It is for this reason that the council requests that a hearing be held in Bristol prior to the decision being rendered on your dredging permit application.

We appreciate your consideration and look forward to a favorable response.

Very truly yours,
Diane C. Mederos
Council Clerk

cc: Congressional delegation
Local Legislators

State of Rhode Island and Providence Plantations

HOUSE OF REPRESENTATIVES

REPRESENTATIVE RAYMOND E. GALLISON, JR. *District 69*

September 13, 2004

Crystal I. Gardner
Chief, Permits & Enforcement Branch
Regulatory Division
United States Army Corps of Engineers
New England District
696 Virginia Road
Concord, MA 01742-2751

RE: Weaver's Cove Energy, LLC and Mill River Pipeline, LLC
File Number: 2004-2355

Dear Ms. Gardnier:

On behalf of the citizens of Bristol and Portsmouth, Rhode Island, I am requesting that your agency conduct public hearings in Bristol, Rhode Island, and Portsmouth Rhode Island, for the dredging permit pending before your agency.

At the Federal Energy Regulatory Commission hearing on September 8, 2004, many citizens, including myself, learned for the first time that your agency would be utilizing that FERC hearing as your agency's hearing for the above referenced dredging permit. This was grossly unfair to those individuals who wanted to comment on the dredging permit application.

The channel in Mt. Hope Bay, the location of the proposed dredging activities, will be greatly adversely impacted by any dredging. Many individuals engaged in commercial fishing have had their livelihoods stymied by the depletion of fishing stocks in Mt. Hope Bay. They deserve an opportunity to have their voices heard about the proposed permit application, and can provide you agency with first hand testimony as to the impact of this application. Conducting public hearings in Bristol and Portsmouth will provide that opportunity.

Thank you for your consideration to this request.

Very truly yours,

Raymond E. Gallison, Jr.
Representative - District 69

50 KING PHILIP AVENUE, BRISTOL, RHODE ISLAND 02809
ROOM 21 STATE HOUSE, PROVIDENCE, RHODE ISLAND 02903

September 7, 2004

U.S. Army Corps of Engineers
Attn: Brian Valiton
N.E. District
696 Virginia Rd. Suite 1
Concord, MA 01742

Re: Weaver's Cove LNG Project in Fall River, Docket # CP04-36-000

Dear Mr. Valiton,

Please find enclosed my comments pertaining to the Weaver's Cove LNG Project to be located in Fall River. Although I have sent my required copies to the Federal Energy Regulatory Commission (FERC) it has been recommended to me that I should also send my comments to your agency.

I also request that your agency continue to look very carefully at every environmental aspect pertaining to this project. Many of us in Fall River and the surrounding communities believe that this project will hurt the environment, impact the fishing industry, affect the water quality of the bay and river, harm the summer recreational activity and endanger not only the animal life but the human life as well. Thank you for your attention to this matter.

Sincerely,

Brian Pearson
886 Cherry St.
Fall River, MA 02720

Edward M. Lambert, Jr.
Mayor

City of Fall River
Massachusetts
Executive Department

One Government Center
Fall River, MA 02722
Tel. (508) 324-2600
Fax (508) 324-2626
(508) 324-2000 Voice/TDD

August 9, 2004

Mr. Jamie Fosburgh
U.S. Department of the Interior
National Park Service
15 State Street
Boston, MA 02109

RE: Weaver's Cove Energy, LLC – Draft Environmental Impact Statement for the Weaver's Cove LNG Project

Dear Mr. Fosburgh:

I am writing on behalf of the City of Fall River, MA, following the issuance on July 30, 2004 of the DEIS by the Federal Energy Regulatory Commission (FERC) concerning the above project. We request, prior to the U.S. Department of the Interior taking any position concerning the comments and concerns raised by the Department of the Interior and the FERC's assumptions and conclusions about the lack of significant impacts upon the Taunton River as it relates to its potential designation as a Wild and Scenic River, that we be afforded an opportunity to meet with you and your staff.

The public comment period for the DEIS runs through September 20, 2004 and two public hearings have been scheduled for September 8th and September 9th. Therefore, there is no need for the Department of the Interior to expedite its considerations of the FERC's assumptions and conclusions, which may deviate significantly from and not adequately address concerns that the Department expressed in previous correspondence to the FERC.

We recently met with representatives from EPA Region 1 to discuss a series of issues, including information sharing with the cooperating federal agencies, as part of an overall, coordinated strategy for reviewing and responding to the DEIS. We very much believe that the Department of the Interior is integral to this process, given the significant and potentially permanent, adverse impacts that could result from this project upon the Taunton River, a potential Wild & Scenic River.

We would also point out, as we did to EPA, that this DEIS represents the first project to be implemented in New England under the FERC's accelerated "pre-NEPA filing process," which decreases the period for cooperating agency reviews by 6 – 8 months when compared to traditional NEPA review. The manner in which the FERC addresses the concerns and conclusions of cooperating agencies and other interested parties in this filing will set a precedent in this region for all future, expedited NEPA reviews.

We therefore request that the Department of the Interior, prior to adopting any substantive or procedural posture relative to the DEIS, schedule a meeting with representatives from the City of Fall River to discuss this matter.

Sincerely,

Edward M. Lambert, Jr.
Mayor

Cc:

Brian Valiton, Regulatory Permits
United States Army Corps of Engineers, New England District
696 Virginia Road
Concord, MA 01742-2751

Betsy Higgins
United States Environmental Protection Agency, Region 1
Mail Code RAA
One Congress Street, Suite 1100
Boston, MA 02114

Paul Diodati
Massachusetts Division of Marine Fisheries
251 Causeway Street, Suite 400
Boston, MA 02114

Alex Strysky
Massachusetts Office of Coastal Zone Management
251 Causeway Street, Suite 900
Boston, MA 02114

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON D C 20426

OFFICE OF ENERGY PROJECTS

In Reply Refer To:
OEP DG2E Gas 1
Weaver's Cove Energy, L.L.C. and
Mill River Pipeline, L.L.C.
FERC Docket Nos. CP04-36-000
CP04-41-000

July 30, 2004

Jamie Fosburgh
U.S. Department of the Interior
National Park Service
15 State Street
Boston, MA 02109-3572

Re: Draft Environmental Impact Statement for the Weaver's Cove LNG Project

Dear Mr. Fosburgh:

Enclosed for your review is the Draft Environmental Impact Statement for the Weaver's Cove LNG Project. Specifically, I would like to direct your attention to section 4.8.6.1 and the discussion of the Wild and Scenic River Program as it relates to the portion of the Taunton River affected by the above referenced project. Based on the information presented, the Federal Energy Regulatory Commission has concluded that construction and operation of the proposed project would not have a substantial adverse affect on the Taunton River's potential designation as a Wild and Scenic River. I am requesting your concurrence with this conclusion or your specific comments so that we can complete our environmental analysis of the project.

If you have any questions or would like to discuss the project, feel free to call me at 202-502-6177 or contact me by e-mail at rich.mcguire@ferc.gov. Thank you in advance for your assistance.

Sincerely,

Rich McGuire
Environmental Project Manager

Enclosure

cc: Public File, Docket Nos. CP04-36-000 and CP04-41-000 (w/o Enclosure)

J. Keith Everett
U.S. Department of the Interior
National Park Service
200 Chestnut Street
Philadelphia, PA 19106

Ted Lento
US Army Corps of Engineers
New England District
696 Virginia Road
Concord, MA 01742-2751

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON D.C. 20426

OFFICE OF ENERGY PROJECTS

In Reply Refer To:
OEP DG2E Gas 1
Weaver's Cove Energy, L.L.C. and
Mill River Pipeline, L.L.C.
FERC Docket Nos. CP04-36-000
CP04-41-000

July 30, 2004

Jamie Fosburgh
U.S. Department of the Interior
National Park Service
15 State Street
Boston, MA 02109-3572

Re: Draft Environmental Impact Statement for the Weaver's Cove LNG Project

Dear Mr. Fosburgh:

Enclosed for your review is the Draft Environmental Impact Statement for the Weaver's Cove LNG Project. Specifically, I would like to direct your attention to section 4.8.6.1 and the discussion of the Wild and Scenic River Program as it relates to the portion of the Taunton River affected by the above referenced project. Based on the information presented, the Federal Energy Regulatory Commission has concluded that construction and operation of the proposed project would not have a substantial adverse affect on the Taunton River's potential designation as a Wild and Scenic River. I am requesting your concurrence with this conclusion or your specific comments so that we can complete our environmental analysis of the project.

If you have any questions or would like to discuss the project, feel free to call me at 202-502-6177 or contact me by e-mail at rich.mcguire@ferc.gov. Thank you in advance for your assistance.

Sincerely,

Rich McGuire
Environmental Project Manager

Enclosure

cc: Public File, Docket Nos. CP04-36-000 and CP04-41-000 (w/o Enclosure)

J. Keith Everett
U.S. Department of the Interior
National Park Service
200 Chestnut Street
Philadelphia, PA 19106

Ted Lento
US Army Corps of Engineers
New England District
696 Virginia Road
Concord, MA 01742-2751

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
OFFICE OF COASTAL ZONE MANAGEMENT
251 Causeway Street, Suite 800. Boston, MA 02114-2136
(617) 626-1200 fax: (617) 626-1240

September 20, 2004

Ms. Magalie R. Salas, Secretary
Federal Energy Regulatory Commission
888 First St., N.E., Room 1A
Washington, DC 20426

Re: Docket Nos. CP04-36-000 and CP04-41-00
Draft Environmental Impact Statement (DEIS)
Weaver's Cove Energy Project, Bristol County, MA

Dear Secretary Salas:

The Massachusetts Office of Coastal Zone Management (CZM) is the state agency responsible for implementing the Coastal Zone Management Act of 1972, as amended (16 U.S.C. 1451 *et seq.*) in Massachusetts. Pursuant to 15 CFR part 930, CZM conducts Federal Consistency Review of federal activities, including permitting decisions, to ensure that these activities are consistent with enforceable coastal policies described in the Massachusetts Coastal Zone Management Plan and the state's federal consistency regulations at 301 CMR 23.00. CZM has reviewed the above-referenced Weaver's Cove Energy LNG Project Draft Environmental Impact Statement (DEIS), and requests that a Supplemental DEIS be developed to address the threshold deficiencies detailed below. The information requested herein will be required for CZM's federal consistency review of the project, which will include reviews of permitting actions by FERC, Army Corps of Engineers, and other federal agencies. In addition, please see our comment to the Corps of Engineers, attached, which are incorporated herein by reference.

1. Summary of Issues/Recommendations

From the information provided in the DEIS, it appears that the project as proposed would cause significant impacts to the resources and uses of the coastal zone. As described in more detail below, CZM has identified three primary and related issues that require additional documentation:

- The alternatives analysis is incomplete and should be supplemented to include additional detail regarding environmental and safety issues associated with alternative site locations.
- The disposition of the material to be dredged is a threshold issue that should be resolved in the DEIS. The proposed upland reuse of dredged material is a speculative alternative on which all assessments of potential impacts are based.
- The design and operational management of the proposed dredging require additional characterization to determine the extent of potential impacts.

2. Background

The proposed project includes construction and operation of a 200,000 cubic meter Liquefied Natural Gas (LNG) storage tank, a dock and LNG off-loading facility. The site is located within the Fall River Designated Port Area (DPA). The project will require 2.6 million cubic yards of maintenance and improvement dredging in a federal navigational channel, and significant expansion of the existing turning basin. As proposed, the dredging activity and related impacts is expected to last for three years. Disposal of the dredged material is proposed on the 73-acre terminal and storage tank site, where it will be used to create a containment dike and other landforms. The project also includes LNG vaporization equipment and infrastructure and two gas pipeline extensions necessary to connect the LNG facility to the existing Algonquin gas pipeline system.

The project is being simultaneously reviewed under the Massachusetts Environmental Policy Act (MEPA) administered by the MEPA Unit under the Massachusetts Secretary of the Executive Office of Environmental Affairs. As noted in the DEIS, FERC and MEPA have agreed to a special review procedure to allow for the coordinated review of the project. Under this procedure, MEPA will review the DEIS prepared by FERC, but seek additional information or analysis, if necessary, directly from the project proponent.

3. Alternatives Analysis

CZM's Energy Policy #1 states:

> [f]or coastally dependent energy facilities, assess siting in alternative coastal locations....Weigh the environmental and safety impacts of locating proposed energy facilities at alternative sites.

The DEIS does not adequately characterize the environmental and safety impacts of potential alternatives to the Fall River site. At a minimum, supplemental information should quantify the potential impact to environmental resources and human safety associated with an alternative coastal location as the baseline for a detailed comparative analysis with the preferred alternative. Note that this will require that additional information be provided to characterize the preferred alternative, as described in #5, below.

CZM also recommends that the supplemental information include an expanded analysis of the *LNG terminal alternatives* for several of the potential onshore alternative sites. These sites include the Boston Harbor site, the Providence Harbor site, Quonset Point site, Coddington/Melville site, the New London Harbor site, and the Prudence Island site.

Importantly, one or more of the LNG facilities that have been recently proposed in New England could potentially serve New England energy needs with less environmental and/or safety impacts than the Fall River project. Therefore, CZM recommends that a comparative

analysis of these alternative facilities be provided in the SDEIS. In addition, we note that the Governors of the northeast states are currently preparing a comprehensive assessment of the role of natural gas and LNG in the region. This assessment of the region's future energy needs, and the role LNG may play in addressing those needs, will inform decisions regarding the development of major energy infrastructure. We strongly encourage FERC to incorporate these materials in the ongoing EIS process.

CZM recommends reformatting the DEIS to allow review of the public safety impacts both separately and in conjunction with the environmental impacts for the various alternatives. This would allow reviewers to more easily determine if a site was eliminated from consideration primarily for public safety reasons, environmental reasons, or some combination of the two.

As part of an enhanced *postponed action alternative* analysis, CZM recommends that a full discussion of the impacts of the recently modified completion date for the new Brightman Street Bridge be included in the SDEIS. This should include discussion of how this later completion date affects the proposed project, the regional gas supply, and how any delay in completion of the bridge may provide the opportunity for additional study and analysis.

CZM recommends that supplemental information be submitted regarding the enhanced *system alternative* analysis and that this information investigate potential options that eliminate or reduce the need for significant LNG truck loading capacity at any new LNG terminal. The potential decoupling of the need for an LNG trucking facility at any new LNG facility may expand the potential universe of sites for consideration of an LNG import terminal.

4. Upland Reuse of Dredged Material

The Department of Environmental Protection has raised significant concerns regarding the viability of the proposed upland reuse of the dredged material. Because a fundamental purpose of a Draft EIS is to identify a practicable alternative on which final assessments of impacts and benefits are subsequently predicated this issue must be resolved prior to advancing to Final EIS materials.

From CZM's analysis of the sediment data, it appears that a more nuanced approach to managing the dredged materials may be feasible and appropriate. Instead of the proposed 'all or nothing' upland reuse, an analysis of the dredged material under the federal suitability determination procedures for open water disposal would provide CZM and other agencies with the means to evaluate whether impacts of the project as proposed have, in fact, been avoided and minimized to greatest extent possible. That comparison is currently impossible, given the absence of such information. CZM requests that the SDEIS characterize the dredged materials for their suitability for open water disposal, and develop an alternative that incorporates both upland and open water reuse/disposal.

In the event that both disposal options are deemed feasible from a regulatory perspective, the SDEIS should present a comparative analysis of the environmental impacts of the two disposal options.

5. Dredging Management

The design and operational management of the proposed dredging require additional characterization to determine the extent of potential impacts. The DEIS materials provide only general information regarding measures to avoid and/or minimize impacts to aquatic resources and water quality, leaving detailed management measures to be developed "prior to construction." Given the potentially significant impacts to shellfish and sensitive life stages of aquatic organisms, CZM requests that these materials be provided to a greater level of specificity in the SDEIS. Absent this more detailed information, it is not clear to CZM that the project as proposed is permittable.

6. Use Conflicts

CZM is concerned that the extensive presence of the moving safety exclusion zone for LNG vessels in transit has the potential to impact both commercial maritime traffic and recreational boat traffic in Mt. Hope Bay. In the portion of the Taunton River near the LNG terminal, CZM is also concerned about the impacts on recreational boat traffic caused by the continuous safety exclusion zone necessary around the docked vessel.

FERC has suggested that consideration be given to scheduling bridge closures to avoid peak traffic periods. As an effort to further avoid use conflicts, CZM suggests consideration be given to avoid LNG vessel movement on days expected to have high volumes of recreational boating traffic, or large crowds on the waterfront. CZM requests additional detail on how the safety exclusion zone will be implemented, including proposed methods of notification for other large vessels and smaller recreational and commercial boats and the amount of time between the notification and the execution of the safety exclusion zone. CZM would also requests additional information on whether the safety exclusion zone will impact public access along the shoreline. Any impacts to existing boating activities or public access should be minimized.

Federal Consistency

The DEIS states that Federal Consistency Concurrence from CZM "...must be received prior to issuance of a Notice to Proceed with construction from the Secretary of the FERC" (p. 4-112). The purpose of Federal Consistency Concurrence is to ensure that the proposed project is consistent with CZM's enforceable program policies. It is important to note that, pursuant to its regulations at 310 CMR 23.00, CZM cannot begin its Federal Consistency Review until the Final MEPA Certificate is issued, and cannot issue concurrence until all other state environmental permits and licenses have been successfully obtained for the project. For further information on this process, please contact Alex Strysky, CZM Project Review Coordinator, at 617-626-1219 or

visit the CZM web site at www.state.ma.us/czm/fcr.htm. For questions regarding the substantive comments contained in this letter, please contact David Janik, CZM South Coastal Regional Coordinator, at (508) 946-8990.

Sincerely,

Susan Snow-Cotter
Acting Director

SSN/dsj, tpc, arw

Cc: Jim Hunt, EOEA
Dave Janik, CZM
Elizabeth Kouloheras, DEP
Paul Diodati, DMF
Dave O'Connor, DOER
Ben Lynch, DEP

Commonwealth of Massachusetts

Division of Marine Fisheries

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Paul J. Diodati
Director

September 17, 2004

Ted Lento
U.S. Army Corps of Engineers
New England District
696 Virginia Road
Concord, MA 01742-2751

Re: File Number: 2004-2355, Weaver's Cove Energy LNG Import Terminal Project Draft Environmental Impact Statement

Dear Mr. Lento:

The Division of Marine Fisheries (*MarineFisheries*) has reviewed the Draft Environmental Impact Statement (DEIS) from Weaver's Cove Energy, LLC to conduct maintenance and improvement dredging and construct a liquefied natural gas (LNG) import terminal along the Taunton River in Fall River. We offer the following comments and resource information for your consideration.

Mount Hope Bay and the Taunton River provide valuable habitat for a diverse assemblage of finfish and invertebrates. In recognition of the extremely productive shellfish habitat and resources found within and adjacent to the proposed project footprint, these portions of the Taunton River have been characterized by *MarineFisheries* as "Significant Shellfish Habitat" and are therefore afforded protection under the Massachusetts Wetlands Protection Act (310 CMR, 10.34). In addition, many diadromous fish species use all or some of the Taunton River for passage, spawning, nursery, and forage habitat. Many of these species provide forage for other predatory fish and may themselves be harvested by recreational and commercial fishermen. Finally, various life stages of numerous other finfish species transit and/or inhabit the river during the year.

As has been noted in previous correspondence to FERC staff and the State and Federal Regulatory agencies, the materials provided in support of the Weaver's Cove project have contained a number of unsupported conclusions, faulty and/or missing analyses, and invalid assumptions as to the potential impact to marine fisheries habitat and resources. Regrettably, this precedent is continued in the DEIS. Specifically:

- Estimates of the range and magnitude of potential negative impacts to finfish and shellfish very likely underestimate these effects as they are based on inadequate models that cannot accurately portray conditions within the river system due to inadequate data. The models do not include any inputs for turbidity/suspended solids during high flushing and/or low water flow periods because no such data were collected. Further, we continue to question the accuracy of a model that was only tested against the one month's data upon which the model was based. As this modeling is linked to a proposal to perform year-round dredging for three plus years, it seems reasonable to require the collection of multiple years' worth of data upon which to base the model.

- The failure of the DEIS to adequately consider appropriate time-of–year (TOY) work restrictions for all species at risk from the proposed activity should be addressed in a supplemental DEIS. Information regarding these species and the associated periods of concern were provided to the applicants and to FERC staff. The only mitigative measures discussed for the proposed dredging were applied to winter flounder spawning periods, and these do not even adequately protect that resource. There is no discussion of avoidance of impacts to the many diadromous species that move through the area, nor a realistic discussion of potential shellfish impacts. It is not possible to conduct continuous dredging for a period of three years in this system without causing substantial negative impacts to marine fisheries resources and habitat. A failure to address these avoidable impacts constitutes a violation of the regulations governing NEPA, MEPA, and CZM Federal Consistency.

- In a similar vein, the supplemental DEIS should contain discussion of actions to minimize and/or mitigate for the impacts likely to result by the regular passage of the LNG tanker and support vessels through the embayment. The recommendation to essentially ignore these impacts implicit in the DEIS is unacceptable.

- The use of spuds to anchor dredge barges during dredging does address potential concerns about anchor placement and chain sweep provided that no other types of anchoring systems will be used. However, the assertion that all spud placements will take place within the dredge footprint is not credible. No such level of precision is possible when using heavy construction equipment. The placement, management, and removal of spuds and any other anchors remains a concern for quahog habitat and resources found adjacent to the navigation channel.

- Proposals to perform one-time shellfish seeding and remove quahogs from the dredge footprint do not address the direct loss of habitat caused by dredging or the continuing impacts that are likely to result from vessel passage through the river.

- *MarineFisheries* recommends that the supplemental DEIS include a more comprehensive discussion of the contribution that dredging and vessel operations associated with the Weaver's Cove project will make to the overall cumulative impacts visited upon the marine fisheries resources and habitats found in the Mount Hope Bay /Taunton River system. The DEIS does an adequate job of listing the many sources of impact found in this embayment, but fails to make the connection that any impact caused by the Weaver's Cove project will contribute to this total. Further, it is completely inappropriate to dismiss individual impacts because they appear to be smaller than other perturbations already occurring in the system.

- A more comprehensive discussion of the use of horizontal directional drilling (HDD) is warranted in the supplemental DEIS. The seeming rejection of this technique for use in the Taunton River is based on speculation and does not appear to reflect the state-of-the-art. Considerably more flexibility and range in the use of this technique were recently demonstrated during construction of the Hubline gas pipeline through Massachusetts Bay. The supplemental DEIS should reflect these and other recent advances.

- The DEIS contains virtually no discussion of the potential impacts from the withdrawal of millions of gallons of river water for ballast and hydrostatic testing other than a brief accounting of potential impingement/entrainment mortality. The regular withdrawal of such volumes of water needs to be discussed within the context of other similar activities within the embayment and with due consideration of the greater impact such activity may have during periods of drought or seasonal low water.

- The supplemental DEIS should contain a more contemporary and comprehensive analysis of the potential for siting an offshore LNG terminal. Efforts in the Gulf of Mexico are considerably more advanced than as portrayed, and the proposal for an offshore terminal off the coast of Gloucester, Massachusetts is in the pre-application meeting phase.

Questions regarding this review may be directed to Vin Malkoski in our Pocasset office at (508) 563-1779, ext. 119.

Sincerely,

Paul J. Diodati
Director

Cc: Representative David B. Sullivan
Mayor Edward Lambert, City of Fall River
Fall River Conservation Commission
Somerset Conservation Commission
Theodore Barton, Epsilon Associates
Tim Timmerman & Eric Nelson, US EPA
Chris Boelke, NMFS
John Felix, DEP
Alexander Strysky, MCZM
Hickey, Whittaker, Sawyer, & Brady, MDMF

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO
ATTENTION OF

September 17, 2004

Regulatory Branch
CENAE-R-2004-2355

Secretary Magalie R. Salas
Federal Energy Regulatory Commission
888 First Street, NE Room 1A
Washington, DC 20426

RE: Weaver's Cove Energy LLC and Mill River Pipeline, LLC, Fall River, Freetown, Somerset, & Swansea, Massachusetts. FERC Dockets CP04-36 & CP04-41.

Dear Secretary Salas:

We are providing the following comments as a cooperating agency participating in the review of the Environmental Impact Statement for the proposed Weavers Cove Energy (WCE) and Mill River Pipeline project.

1. The draft Environmental Impact Statement (EIS) indicates one of the dredge disposal options is to transport the dredged material for ocean disposal. Once we have completed our review of the sediment sampling plan data that we expect will be provided within the next few months by WCE staff then we will make a determination as to the suitability of the material for ocean disposal. Dredging with ocean disposal could include time of year restrictions on in-water work that may minimize adverse impacts to essential fish habitat and for this reason it may be selected by our office as the preferred disposal method. We recommend that the EIS include the results of the sediment sampling and our determination on the preferred method of dredged material disposal.

2. The option of dredging with upland disposal is currently WCE's preferred method, however the processing of the dredged material to be placed on upland areas will require that dredging activities occur non stop without any time of year restrictions in order to complete the project by 2007. We understand that the Massachusetts Highway Department (MHD) has announced the Brightman Street Bridge removal may not be completed until the 2009-2010 time frame. In this event, several additional years would be available to complete the dredging with upland disposal and therefore time of year restrictions on in-water work may be practicable. Since the MHD bridge removal schedule is an important factor in our determination on dredge material disposal options, a more definitive schedule should be included in the EIS.

3. The EIS should include a dredging option that evaluates upland disposal and incorporates fisheries windows. Information should be provided on the affect of this option on the project schedule, particularly in light of the MHD announcement of the 2009-2010 time frame for removing the Brightman Street Bridge that would act as an obstruction to the LNG tanker.

4. The EIS should more fully describe and evaluate an off-shore LNG alternative with the characteristics of the Excelerate Energy LLC's proposed Northeast Gateway Project to construct an offshore LNG facility southeast of Gloucester, Massachusetts.

5. The need for an alternative that provides both a storage component as well as LNG truck delivery to other LNG storage facilities should be expanded in the project purpose section of the EIS. This would aid in our determination of the least environmentally damaging practicable alternative that satisfies the basic project purpose.

6. Our permit review will include the evaluation of several public interest factors, including safety and traffic impacts. Therefore, we recommend the EIS include the U.S. Coast Guard determination on the need for bridge closings as well as the safety concerns associated with LNG tankers transiting Narragansett Bay and Mount Hope Bay. If bridge closing are required, then the associated impacts on traffic should be provided. This information is required in order for the EIS to be a complete document that can be relied upon to provide the information necessary for our permit review.

7. The draft EIS raised issues that require further coordination with various Federal and State Agencies in order to provide sufficient information to determine the project's compliance with the Endangered Species Act, the National Historic Preservation Act and the Wild and Scenic Rivers Act. Since a Corps permit cannot be issued until we have determined the proposed work in our jurisdiction complies with these Acts, we therefore recommend that the EIS contain this determination along with sufficient information for our office to concur.

We look forward to continued consultation with your office concerning this project. If you have any questions or comments concerning this matter, please contact Ted Lento, Regulatory Division Project Manager, at 978 318-8863.

Sincerely,

Christine Godfrey
Chief, Regulatory Division

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September 17, 2004

Brian Valiton
Ted Lento United States Army Corps of Engineers
New England District
696 Virginia Road
Concord, MA 01742-2751

RE: File Number 2004-2355;
Weaver's Cove Energy, LLC and Fall River Pipeline, LLC

Dear Sirs:

The following submission and attachments constitute the written comments offered on behalf of the City of Fall River, MA, on the above-referenced permit applications.

The applications are administratively incomplete and substantively deficient, making it difficult to capture the full scope of interests upon which the public ordinarily would comment in such a permit proceeding. Further, the applications do not stand as independent documents that can be effectively reviewed, within the intent of the regulations, because they do not include much of the material upon which conclusions and demonstrations concerning the meeting of performance standards are based; they merely reference other documents.

Despite these material limitations and constraints, the City of Fall River offers the following comments.

Project Description

On March 16, 2004, Weaver's Cove Energy, LLC and Mill River Pipeline, LLC, collectively the "Applicant," filed applications, collectively treated in these comments as the "Application," for U.S. Army Corps of Engineers permits under Section 404 of the Clean Water Act, 33 U.S.C. § 1344 et. seq. and Section 10 of the Rivers and Harbors Act, 33 U.S.S.C. § 403 et. seq.

The LNG terminal, pipelines, and ancillary facilities, ("project") are proposed to be constructed on an approximately 73 acre site, the former Shell Oil Products Distribution and Storage facility. The pipelines will traverse portions of Fall River, Somerset, Swansea, and Freetown and include fourteen stream crossings and a proposed 2000 ' open cut trench through the Taunton River.

The LNG terminal portion of the project includes docking facilities for at least two 780' LNG tankers at once, as well as a boat ramp for security vehicles and docking for tugs and other marine vehicles and barges, as well as a truck loading facility. The trucking facility is designed to service up to four trucks simultaneously and to provide service for 100 trucks/day entering and leaving the facility.

The staging and construction of the terminal and associated facilities has been described in only the broadest terms in the Application; no accurate assessment of impacts resulting from pre-construction preparation and demolition, construction, and operations and maintenance can be discerned from the information currently filed with or issued by the U.S. Army Corps of Engineers (USACE), the Federal Energy Regulatory Commission (FERC) and the Massachusetts Department of Environmental Protection (MADEP). This information includes the Draft Environmental Impact Statement/Draft Environmental Impact Report issued by the FERC on July 30, 2004, a construction plan approval filed with the MADEP in March 2004, three Section 401 Water Quality Certificate Applications filed with the MADEP in April and May 2004, and two Chapter 91 Waterways License/Permit applications filed with the MADEP in April and May 2004.[1]

Project Construction

The construction process has been described by the Applicant as follows. In order to provide sufficient depth and breadth to LNG tankers, an estimated three years of continuous, twenty-four hour/day, seven day/week dredging of the Taunton River, to depths in excess of the Federal Channel limits, with no Time of Year restrictions, will be commenced. The contaminated sediments dredged from the waterways will be brought to the upland, with backflow directed into the Taunton River and other coastal resources, in volumes estimated from 2.1 million cubic yards to 3.1 million cubic yards. This is described to be the most critical piece of site development, but the basic volumes of contaminated sediments have yet to be established and the estimated volumes vary significantly. The Applicant estimates 2.1 – 2.5 million cubic yards. The DEIS estimates 2.8 – 3 million cubic yards. NOAA Fisheries estimates 3.1 million cubic yards.[2]

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[1] Additional submissions have been made to Rhode Island executive agencies that are outside the scope of this review.

[2] As set forth in the City of Fall River's September 10, 2004 comments to the FERC in Docket Numbers CP04-36-000 and CP04-41-000, NOAA Fisheries has estimated this volume since September 26, 2003. That estimate has finally been accepted by the FERC and the DEIS recommends that a plan be developed for managing this amount of material. NOAA Fisheries has also repeatedly pointed out that the overdredge figures are incorrect and that the

There are at least three other critical components concerning the dredging program missing from the information provided in the Application, making it impossible to realistically assess impacts of the project:

Management of Dredged Sediments. The Application describes three possible methods for managing the dredged sediments; in-water processing on scows at variable production rates, pug mill processing in coastal resources areas, again at variable production rates, and land-based placement and processing anywhere space may become available during construction on the southern portion of the site. "Anywhere" includes Waters of the United States, as defined by the USACE. The Application reserves any final process and production rate to the dredging contractor.

Alternative Dredging Methodologies. The utility of the alternatives analysis for managing the dredged materials is described by the Application as, "solely for illustrative purposes of the typical dredging and disposal alternatives, sequence, and inter-relationships." (App. at page 53). This "illustrative" analysis describes hypothetical dredging limits that would be sufficient to satisfy navigational requirements and dredging methodology alternatives, but fails to provide project-specific information.

Alternative Dredge Disposal Methodologies. The Application provides a table of possible disposal methodologies and possible disposal sites in Southeast New England. (App. at page 58). The table is used to justify the conclusion that only land-based disposal on the project site will work for the project purpose. The table has all of the utility of a telephone book when it comes to assessing alternatives.

Following the ongoing, indeterminate methodology, indeterminate volumes of contaminated sediments, and indeterminate processing, stockpiling, de-watering, and stabilization activities, the dredged sediments will be used for site grading and for the creation of berms and containment facilities around the LNG tank and associated piping. It will also be used to create a 100' high "landform" to, according to the Applicant, provide some visual screening and noise buffering. See Attachment 1: Correspondence dated October 10, 2003 from Applicant to Shell Oil Company, copy attached hereto. See also DEIS at 4-132.[3]

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maintenance and improvement dredging figures are inaccurate. On July 28, 2003, the MADEP and the Massachusetts Office of Coastal Zone Management both commented that any dredging beyond the authorized channel depth of 35' would be considered improvement dredging. That distinction and the associated performance standards have been ignored by the Applicant.

[3] Copies of all pages of the DEIS referenced in these comments are provided in Attachment 6.

Finally, the LNG terminal will be connected to proposed pipelines, which will be constructed in sequence, following the completion of the dredging and disposal program.

USACE Application Standards

As a threshold matter, the Application submitted to the USACE fails to provide the basic information necessary to conclude the Application is complete.

The following example of essential incompleteness is illustrative, not exhaustive. The USACE New England Division Guidance for submitting permit applications for dredging projects (page 16) requires, at a minimum, the following information. The information that has not been submitted, or is materially incomplete, is highlighted:

Plan view with existing bottom depths;

Section view;

Amount of material to be dredged;

Proposed dredging depth;

Method of dredging;

Stipulate maintenance or new dredging;

Disposal Site for dredged material;

Location of any discharges on the plan and any potential non-point source discharges of pollution;

Point Source discharges/spills must be investigated;

Submit any previous test data;

If the disposal site is upland, specify the site on a map; provide the site's existing characteristics;

Method of containment;

Specify the materials to be used for berm construction and the construction method;

Specify the method of transporting the dredged material from the site to the disposal area;

Submit grading plans;

Specify the long-term planned use of the site;

Specify containment site capacity calculations;

If open water disposal is chosen as the disposal site for the material to be dredged, submit a detailed upland disposal alternative analysis.

Amount of material to be dredged. While total volumes may be initially uncertain for many projects, the uncertainty in the volumes proposed to be dredged here amounts to a potential difference and increase of approximately one million cubic yards of contaminated sediments. Until that amount can be established with some certitude, no credible assessment of dredging methodology, impacts, or disposal alternatives can be formulated.

Proposed dredging depth. There is no certitude about these figures either. The Applicant has misapplied the concept of "overdredge," as commented upon by NOAA Fisheries, and has failed to apply the USACE standards for overdredge calculations. Providing possible depths is insufficient to evaluate the impacts of this project under the USACE's Guidelines.

Stipulate maintenance or new dredging. While numbers have been provided, the numbers are inaccurate. As commented upon by NOAA Fisheries, areas that are clearly improvement dredging have been characterized as "maintenance" dredging.[4] Until those numbers are certain, there is insufficient information, under the USACE's Guidelines, to assess the impacts of the project.

Location of any discharges on the plan and any potential non-point source discharges of pollution.

This requirement emphasizes a number of problems with the Application.

The Application does not identify potential non-point source discharges of pollution, because it cannot. The construction management and sequencing program is so ambiguous and incomplete and the proposal to manage the

[4] See also Attachment 2: City of Fall River Comments to the MADEP on July 9, 2004, concerning the Chapter 91 Permit Applications, at pages 2 – 3.

significant volumes of dredged sediments anywhere and everywhere on the southern portion of the site make such identification impossible.

The plans do identify existing discharges from current site activities, as well as an existing CSO discharge and a NPDES permitted discharge from the Chapter 21E groundwater treatment system operated on the project site by Shell Oil Products. However, the Applicant also states that it plans on relocating several discharge points. As the Applicant has no right to control and does not hold the permits for these discharges, any assertion about relocations has no credible basis and is insufficient for assessing impacts of discharges from the project.

The plans for erosion and sedimentation control are, in large part, conceptual. The proposal for demolition of existing piping, buildings, and facilities prior to construction has not even been submitted yet.[5] It is impossible to reliably identify discharges, point sources and potential non-point sources, without this information.

Finally, until the volumes of dredged sediments, a management and sequencing plan, and a selection of methodology for stabilization and placement on the site are identified, there is no credible way to identify discharges from the project.

If the disposal site is upland, specify the site on a map; provide the site's existing characteristics.

The Application proposes to dispose of the dredged sediments on the southern portion of the site, to construct berms and a 100' "landform."[6] While

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[5] Weaver's Cove Energy, LLC and Miller River Pipeline, LLC have submitted two Notices of Intent to the City of Fall River, and Notices of Intent for the Pipelines to Swansea, Somerset, and Freetown.

The Notices to the City of Fall River were filed on June 28, 2004; one for the construction of the LNG terminal and one for the pipeline ROW within Fall River. These Notices expressly provided that pre-construction demolition and site preparation were out of the control of either Weaver's Cove Energy, LLC or Mill River Pipeline, LLC and that the current site owner, Fall River Marine Terminal, LLC, would be filing the applications for these activities. To date, nothing has been filed and no information has been provided concerning the submission of this information.

[6] The Application fails to include, under necessary state permits and approvals, the need to secure a site assignment for the disposal of solid waste in Massachusetts or, alternatively, the need to obtain a Beneficial Use Determination from the MADEP. While the project uses the words "re-use" and "disposal" almost interchangeably, the DEIS acknowledges, as do portions of the dredging program description, that the upland is the only alternative being considered by the Applicant for disposing of the sediments.

the berms and the landform are included on the site plans, as well as the fill areas in the wetlands, there is no information concerning upland disposal of the total 3.1 million cubic yards of contaminated dredged sediments upland. The areas where this material may be staged, stockpiled, processed, and graded are unknown, as the plans identify the entire site for use at any point for all of these activities.

The Application does describe the ongoing remediation activities being performed on the site by Shell Oil Products, under the direct supervision of the MADEP's Chapter 21E (state Superfund) program under RTN 04-0749. It does not describe in any detail the three to four foot layer of LNAPL that overlays portions of the groundwater under the site, which discharges to the Taunton River. It also fails to include a series of other, very significant peces of information.

The Application neglects to mention that portions of the active remediation system, which removes the LNAPL and contains its migration to the Taunton River, will have to be shut down for prolonged periods during construction of the LNG terminal and that Shell Oil Products, the operator of the system, has not agreed to allow this or any other modification of the treatment system, nor has the MADEP modified the approved remediation plan.

The Application neglects to mention that before any dredged material will be allowed to be placed on the site, the MADEP will require a characterization of existing conditions on the site. While this requirement has been acknowledged in the DEIS, no sampling has been performed, which means no information is available for consideration in this Application.

The Applicant has concluded that contamination in the sediments to be placed on the site will not violate the "anti-degradation" requirements of the Massachusetts Contingency Plan; 310 CMR 40.0032(3) (which is also a requirement for the Massachusetts Section 401 Water Quality Certification); but no LSP Opinion, as would be required under Massachusetts state law, was submitted with the Application.[7] See also Attachment 3: July 26, 2004 Shell Oil Products Comments to the Fall River Conservation Commission, copy attached hereto, as well as the March 2004 Shell Oil Products Comments to the FERC, copy attached hereto.

Existing site conditions have not been described adequately and the information necessary to consider impacts under this Application has not been

[7] As set forth in Attachment 1, it is impossible to determine whether levels of contaminants in the sediments, including arsenic and mercury, combined with existing contamination on the site, would violate the Massachusetts Contingency Plan, because the testing has not been done.

developed. Without such information, no credible assessment of impacts of this Project may be performed.

Specify the materials to be used for berm construction and the construction method.

The Application provides a list of hypothetical methodologies and admixtures, but fails to include any project-specific methods, quantities of materials, stabilization techniques, ways to minimize compaction, erosion, and destruction of wetland resources, or ways to mitigate unavoidable impacts.

Specify the method of transporting the dredged material from the site to the disposal area.

The Application provides a list of hypothetical techniques, but no project specifications. Those specifications, according to the Applicant, are being left to the judgment of the dredging contractor after commencement of construction. This makes it impossible to credibly quantify impacts, propose avoidance measures, evaluate alternatives, or propose reasonable mitigation plans.[8]

If open water disposal is chosen as the disposal site for the material to be dredged, submit a detailed upland disposal alternative analysis.

This requirement assumes that a complete and appropriate alternatives analysis was performed prior to filing an application is filed with the USACE. No disposal alternative other than placing the dredged sediments on the project site has been realistically considered by the Applicant, which leaves open the suggestion that this requirement is not applicable to this Application. However, such a position flies in the face of the requirements of the USACE, the National Environmental Policy Act (NEPA), and the Massachusetts Environmental Policy Act Certificate issued by the Executive Office of Environmental Affairs on August 28, 2003 (MEPA Certificate); included here as Attachment 4, to evaluate all practicable alternatives, including a disposal plan that did not require any upland disposal.[9]

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[8] The DEIS recommends that the Applicant, as part of the DEIS process, submit a plan for mitigating unavoidable wetland impacts. Such a plan would be assessed by the FERC and conclusions would be drawn in the final EIS without any opportunity for public review or comment.

[9] "The EIR should evaluate a site layout without disposal of dredged sediment on the site." MEPA Certificate, page 4.

It would be impossible at this juncture for the Applicant to evaluate open water disposal. The Tier III testing required to perform such an analysis has not been commenced and the Supplemental Tier III Plan has been classified as "trade secret" material, which, according to the DEIS, is still being evaluated by the USACE. This deficiency raises a significant issue.

The Applicant, as set forth earlier, provides a table of hypothetical disposal options. The Applicant fails to go beyond creating this table and has never purported to conduct an alternatives analysis to consider any method of disposal other than placing the contaminated sediments on the project site.

The Applicant is not in any position to even commence a Tier III sampling program, even if approved by the USACE, because the Applicant has not fulfilled the basic requirements of a Tier III precursor, the Tier II sediment sampling plan developed by the Applicant with participation from the USACE and the MADEP.

The Tier II sediment sampling performed by the Applicant failed to comply with the sediment plan in several notable respects. The Tier II Sediment Plan called for 55 cores and 105 discrete samples. The Applicant performed 43 cores and averaged 55 samples. As noted previously, no sampling at all was conducted by the Applicant in the East Channel. Earlier sampling conducted by the Massachusetts Office of Coastal Zone Management (MCZM) was relied upon for this purpose, even though the goals of the MCZM program and this project were distinctly different.

According to the DEIS (4-21 through 4-24) the Tier II sediment samples were screened using the NOAA Screening Quick Reference Tables, employing the Effects Range – Low (ER-L), Effects Range – Median (ER-M) and the Probable Effects Level (PEL).

Of the 12 polycyclic aromatic hydrocarbons (PAHs) tested for in the samples with screening values, eight of the 12 PAHs exceeded the ER-L value, while four PAHs have no assigned values using these screening values, but the actual effects range was not provided. It is therefore impossible to comment on the effects of these contaminants at the levels at which effects frequently occur (ER-M) or where adverse biological effects may be expected (PEL).

Of the eight metals tested for in the samples, individual metals were detected in 82% to 100% of the samples, but in which samples and at what percentages is not provided. The DEIS reports that average concentrations of seven of the eight metals (which included arsenic, cadmium, chromium [III or VI not distinguished], copper, lead, mercury, nickel, and zinc) exceeded the ER-L criterion and seven of the eight metals had average concentrations below the

ER-M and PEL thresholds, again with no distinction about the metals or percentages in each criterion.[10]

The DEIS also reports that average mercury concentrations in the sediment samples exceeded both the ER-M and the PEL values. In other words, mercury levels were found to occur in all the samples at levels where adverse biological effects could reasonably be predicted. Based on even this limited sample set, by ignoring Tier III sampling it is reasonable to infer that either the Applicant never intended to evaluate any other alternative or has a basis to conclude that open water disposal of the materials would be foreclosed without treatment.

While it is simple for the Applicant to say that this requirement is not applicable; that open water disposal is not being considered; that is only because the Applicant has ignored the basic requirement of the USACE regulations to evaluate all practicable alternatives so as to determine which proposal will be the least environmentally damaging, practicable alternative.

State Permits

The Application fails to address several required Massachusetts state permits, should the project go forward in its present form. The Application cannot be considered complete without this additional information.

The Application fails to include that either a site assignment or a beneficial use determination will be required for the disposal of the estimated 3.1 million cubic yards of contaminated sediments on the LNG terminal site.

The Application fails to include that hydrostatic testing of the LNG tank and the pipelines will require a Massachusetts Water Management Act Permit or a Notice of Exclusion from Permitting. The DEIS provides that the 32 million gallons of water needed to test the tank and 760,000 gallons of water needed to test the pipelines will either be taken from the City of Fall River's water supply[11]

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[10] These values also demonstrate that state water quality standards in Massachusetts for, at a minimum, copper and zinc, will not be met. Further, the Massachusetts Water Quality Certification Program incorporates the anti-degradation requirements of the Massachusetts Contingency Plan (MCP); 310 CMR 40.0032(3); and the testing required by the MADEP to demonstrate that these MCP requirements will be met has not been done.

[11] It is very doubtful that the City of Fall River could ever provide that amount of water. Further, as the Applicant has refused to provide the City of Fall River with a copy of the report it prepared concerning water supply and water use, it is unlikely that the City would be in a position to entertain such a request.

or will be withdrawn from the Taunton River, which is classified as a medium-stressed basin by the Massachusetts Executive Office of Environmental Affairs.

The Application fails to include that the MADEP and Shell Oil Products will have to agree to modify the current MCP Phase V remediation plan for removing and containing levels of LNAPL that exceed Upper Concentration Limits in the groundwater flowing under the project site. It also fails to include that any changes to the locations of current discharges authorized under permits and/or waivers held by the City of Fall River and Shell Oil Products, will have to be agreed upon by the City and by Shell.

The Application fails to include that the dredging program as proposed will violate the requirements of the MADEP Noise Policy; DAQC 90-001; (DEIS at pages 4-171 and 4-172).

The Application fails to include the information that the dredging program will not comply with the Massachusetts Waterways program because, among many other notable deficiencies about which comments have previously been submitted to the MADEP, the project refuses to comply with required time-of-year-restrictions on dredging and the DEIS does not recommend either sequencing or time-of-year restrictions. (DEIS at page 4-78).

The Application fails to include that the current site owner, Fall River Marine Terminal, will need to file a Notice of Intent with the Fall River Conservation Commission to demolish existing structures and facilities on the site and to commence pre-construction activities on the site.

Public Interest Review

The USACE bases its decision to issue or to deny a permit based upon a series of factors, which include the public interest review described in the public notice and at 33 CFR § 320.4. The public interest review evaluates the probable impacts, which include cumulative impacts, of the project and its intended use on the public interest.

Relevant factors to be considered in this Application include conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, considerations of property ownership and, in general, the needs and welfare of the people.

The Application failed to consider a series of these factors at all, including economics, aesthetics, general environmental concerns, and the needs and welfare of the people.

For the factors considered in the Application, the cumulative impacts were not evaluated in compliance with the requirements of NEPA for consideration of cumulative impacts.

The Application itself does not include this cumulative effects analysis. The DEIS does address it to some extent (4-235 through 4-246), but fails in several significant ways. This is not to suggest that the DEIS may or should substitute for the required cumulative effects analysis necessary to issue a permit under Section 404 and Section 10. Rather, it is to illustrate that even the minimal efforts at cumulative effects analysis provided by the DEIS, if offered as a supplement to the Application, are inadequate to comply with the USACE requirements.

First, the analysis fails to distinguish or effectively address direct, indirect, and cumulative impacts. The analysis provides a series of simplistic and limited conclusions.

Second, as set forth in the CEQ Guidance entitled "Considering Cumulative Effects Under the National Environmental Policy Act (NEPA);" CEQ 1997; cumulative effects on a resource must consider whether a resource is especially vulnerable to incremental effects. This requirement is generally ignored for most resources and is not addressed at all concerning the effects on the Taunton River, which is both the only free-flowing, un-dammed river in the region and subject to protection under the Wild and Scenic Rivers Program.

Third, the focus of the limited cumulative effects analysis set forth in the DEIS is on specific affected resource areas, not the function of the resources, particularly the aquatic resources, within the broader ecosystem.

The Application is materially deficient and does not comply with the USACE requirements.

The 404(b)(1) Guidelines

As part of its permit application, the Applicant must demonstrate compliance with the Guidelines developed by the United States Environmental Protection Agency in conjunction with the USACE under Section 404(b)(1) of the Clean Water Act. The Guidelines are applicable in the review of proposed discharges of dredged or fill material into navigable waters.

The Guidelines prohibit discharges:

> Where less environmentally damaging, practicable alternatives exist;
>
> Which result in violations of State or Federal Water Quality Standards, the Endangered Species Act, and the Marine Sanctuaries Act;
>
> Which cause or contribute to significant degradation of waters and wetlands;
>
> If all appropriate and practical mitigation has not been taken; or
>
> If there is not sufficient information to determine compliance with the Guidelines.

Least Environmentally Damaging Practicable Alternative

The Applicant, under the 404(b)(1) Guidelines, is required to demonstrate that no practicable alternative to the proposed project exists that would have a less adverse impact on the aquatic ecosystem. An alternative is considered "practicable" if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall project purpose. If it is an otherwise practicable alternative, an area not presently owned or controlled by the Applicant that could reasonably be obtained, utilized, expanded or managed in order to fulfill the basic purpose of the project may be considered. 40 CFR § 230.10(a).

The Applicant has failed to comply with this requirement because the Application does not adequately evaluate realistic alternatives to the project.

On-Site Alternatives

The Application states that alternative lay-outs for the project are not practicable. Specifically, the Application states that the lay-out is predicated on the placement of the LNG tank, which has been sited to maximize required setbacks and exclusion zones. If the lay-out were altered, a site redesign would have to be developed, but the project would comply with all relevant standards for setbacks and exclusion zones to the extent that it does now.[12]

[12] As set forth earlier and as set forth in the comments of Dr. Jerry Havens submitted to the FERC on September 8, 2004, the City of Fall River believes that the project fails to comply with the relevant setback and exclusion zone requirements.

Respectfully submitted on behalf of the City of Fall River, MA,

Carol R. Wasserman

cc: United States Environmental Protection Agency, Region One
NOAA Fisheries
Massachusetts Department of Environmental Protection

ESS Group, Inc.

Attachments

Attachment 1: Correspondence dated October 10, 2003 from Applicant to Shell Oil Products

Attachment 2: City of Fall River Comments to the MADEP dated July 9, 2004

Attachment 3: July 26, 2004 Shell Oil Products' Comments to the Fall River Conservation Commission and March 2004 Shell Oil Products' Comments to the FERC in Docket #s CP04-36-000 and CP04-41-000

Attachment 4: Certificate of the Massachusetts Secretary of Executive Office of Environmental Affairs; EOEA #13064; August 28, 2003

Attachment 5: September 10, 2004 City of Fall River Comments to the FERC in Docket #s CP04-36-000 and CP04-41-000

Attachment 6: DEIS Pages Referenced in Comments

Attachment 1

Weaver's Cove Energy

October 10, 2003 CONFIDENTIAL

Mr. John R. Greene
Real Estate Advisor
Shell Oil Company
910 Louisiana St., Suite 706
Houston, TX 77210-4855

Re: LNG Siting at Fall River Facility – Environmental Issues

Dear Mr. Greene

The purpose of this letter is to address issues outlined in your 24 June 2003 letter to Weaver's Cove Energy (WCE) and your 22 July 2003 letter to the Massachusetts Executive Office of Environmental Affairs regarding WCE's LNG import terminal project (the Project). Please excuse our delay in getting back to you, but we have just completed a number of studies that form the basis for our response.

Sediment Dredging and Upland Placement

WCE plans to beneficially reuse approximately 2.5 million cubic yards of sediment dredged from the Taunton River. The sediment will be used to raise the grade levels of the site and construct landforms to minimize or eliminate potential visual and noise impacts to the surrounding community. In addition, WCE proposes to use the sediment to "cap" the site, as required by the existing deed restrictions.

The construction of landforms at industrial facilities has been successfully completed at other locations in Massachusetts and has been accepted as beneficial by state agencies, including the Massachusetts Department of Environmental Protection (MDEP).

As you know, the WCE Project Team has comprehensively sampled and analyzed the sediment at numerous locations in the channel and the turning basin where the dredging will take place. At a mutually acceptable time, we would like to meet with you to discuss this data. The purpose of the sampling and analysis effort was to evaluate the chemical and physical properties of the sediment to determine whether

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upland placement on the site is an appropriate and acceptable reuse of these materials. To this end, WCE evaluated potential risks associated with the use of these sediments in a manner consistent with Shell's August 2001 Method III Risk Characterization of the existing site conditions which was conducted pursuant to the requirements of the Massachusetts Contingency Plan (MCP, 310 CMR 40.0000) and presently is on file with the Massachusetts Department of Environmental Protection (MDEP).

A comparison of Shell's earlier risk evaluation with the one WCE has just completed indicates the following:

- the sediment does not pose a risk to any of the receptors evaluated in the Shell risk assessment or to construction workers;
- levels of contamination in the sediments are generally lower than levels of contamination in the soil at the site (see attached comparison graph and table documenting maximum and exposure point concentrations for the constituents tested);
- some or all of the petroleum aromatic hydrocarbons (PAHs) and metals detected in the dredge sediment may be attributable to background conditions as defined by the MCP, and;
- the sediment meets the criteria for use at the site under current and potentially applicable MDEP regulations.

Based on these results, levels of contamination in the sediment are lower than or comparable to existing site conditions and sediment placement on the site would not "degrade" conditions at the site.

As noted in your letter, arsenic and mercury were detected in the sediment samples. However, the highest concentrations observed for these compounds are below MCP residential standards. Furthermore, it is not possible to compare the metals data, most of which may be naturally occurring (i.e., consistent with background), to levels currently present on the site because Shell's MCP investigations did not include testing for metals (with the single exception of lead). It is also interesting to note the MCP reports filed by Shell with the Commonwealth indicates that native soils on the site are located very close to river level and have been overlain with dredge material moved to the site when the turning basin was expanded in the 1920's. Hence much of the soil currently present on the site is dredge material. As such, WCE believes that it is appropriate and acceptable to beneficially reuse the dredge material on the site in connection with the project.

Petroleum Recovery System

With respect to ongoing remediation and recovery of petroleum products floating on the groundwater at the site, WCE has already expressed its commitment to upgrade the existing recovery system to meet future construction and operational needs, as well as to control non-aqueous phase liquid (NAPL) migration and reduce contaminant volume in an effective manner. We are working on specific plans to accomplish this goal as we design the Project. Any needed modifications to the site and the treatment system will be completed under the direction of a Licensed Site Professional (LSP) and in accordance with the MCP, and carried out at WCE's sole expense.

The current plan for handling and placement of the dredged sediments includes: dewatering, mixing with small quantities of cement (at a percentage presently being determined by testing), followed by a brief curing prior to placement and compaction in lifts. The permeability of the sediment after this stabilization exercise is currently being tested and results are due shortly. New drainage systems for the site are also being designed. In addition, the effects of site loading from placement of the material are being evaluated and we expect to have a report and monitoring and management plan documented shortly. The results of these evaluations will be taken into account in the modifications to the present remedial system. The recovery of the NAPL will continue during and after construction and the requirements of the MCP will be met.

Shell's MCP Obligations

WCE plans to incorporate the upland placement of the sediment on the site into a comprehensive remedy for the site under the MCP. Shell has expressed concern that increasing the depth of soil (in most areas in excess of 15 feet) above the contamination on the site will increase the cost of site cleanup and will have no benefit under the MCP. The depth, and associated cost of recovery wells will certainly increase. However, WCE has already committed to modifying the system as described above at our expense. In addition, placement of the dredge material is consistent with and supports the Deed Restriction on the property, which requires the placement of a "cap" prior to redevelopment.

WCE plans to implement modifications to the recovery system as necessary to reduce the thickness of the NAPL. However, once the NAPL thickness is reduced to less than ½ inch, a "smear zone" will remain in the subsurface. MDEP guidance clearly states (see attached text which we extracted from MDEP's website) that the "smear zone" associated with NAPL migration or water table fluctuation may contain significant levels of contamination and present a risk under the MCP. The potential risk associated with exceedence of a soil Upper Concentration Limit (UCL – as defined in the MCP) in

this "smear zone" can be mitigated by increasing the depth of the contaminants to greater than 15 feet below grade, as we are proposing to do.

Based on this analysis, we believe that placing the sediments on the site will be in compliance with the MCP requirements and the existing deed restrictions and will also reduce the risk associated with the smear zone, thereby reducing the risks associated with the property.

We will provide you with additional information on our plans for placement of the processed sediment as it becomes available. We would welcome the opportunity to sit down with you and explore the best way forward at your earliest convenience. I will phone you to find the best date for this meeting and to decide whom we should have present.

Sincerely,

Ted Gehrig
President and COO

enclosures:
Chart, Average Concentrations in Sediment and Soil Samples
Table, Construction Worker Method 1 Screening concentrations
MCP Q&A – text lifted from MCP Website "smear zone"

Attachment 2

ESS Group, Inc.

Engineers
Scientists
Consultants

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Wellesley
Massachusetts
02482
p 781.431.0500
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July 8, 2004

John Felix, Deputy Associate Commissioner
Department of Environmental Protection
One Winter Street, Second Floor
Boston, MA 02108

Mitch Ziencina, Waterways Program
Department of Environmental Protection
Southeast Regional Office
20 Riverside Drive
Lakeville, MA 02347

RE: Weaver's Cove Energy, LLC;
Comment Submission of the City of Fall River

Dear Mr. Felix and Mr. Ziencina:

Enclosed please find for the Department's consideration the comments of the City of Fall River addressing the Water Quality Certification Requests and Chapter 91 Permit and License applications submitted by Weaver's Cove Energy, LLC for the proposed dredging program and the development of an LNG terminal and associated pipelines and infrastructure.

Please do not hesitate to contact me at (781) 489-1124 if you have any questions or wish any additional information concerning this submission.

Sincerely,

Carol R. Wasserman
Director of Regulatory Strategies

cc: Lealdon Langley, Waterways Program Director – DEP Boston (w/o attachments)
Gary Moran, Regional Director – DEP SERO (w/o attachments)
Tena J. Davies, Wetlands and Waterways – DEP SERO (w/o attachments)

Office of the Mayor, City of Fall River

The following comments, which are being submitted by the City of Fall River, collectively address the issues presented by the following applications submitted to the Department by Weaver's Cove Energy, LLC (WCE) for certifications and permits:

Water Quality Certification Application dated 4/26/04 – Dredging of Mount Hope Bay – Fall River Harbor Federal Navigation Channel and Turning Basin;

Chapter 91 Waterways LNG Terminal Dredging Permit Application dated 4/27/04;

Water Quality Certification Application dated 5/5/04 - Natural Gas Pipeline Laterals;

Water Quality Certification Application dated 5/7/04 – Weaver's Cove LNG Terminal Site Development; and

Chapter 91 Waterways License Application to Construct and Maintain an LNG Storage and Receiving Facility dated 5/26/04.

The comments are being submitted in one comprehensive filing in order to reflect the inherent interrelationship of the proposed dredging program with the proposed filling of over one acre of Commonwealth tidelands; the upland reuse of the dredged material, and the resulting cumulative impacts upon health, safety, public welfare, and the environment.

One threshold observation must be made at the outset concerning all of the WCE applications submitted to the Department; the technical insufficiency of the information provided for public review and comment. The applications cannot be reviewed as presented because they do not provide the necessary information to understand and evaluate the proposed activities. Specifically, the applications are incomplete concerning characterization of the nature and scope of contamination in the dredged materials, as well as the scope and extent of contamination existing at the proposed upland reuse site, which is an active c. 21E disposal site. This information is integral to any conclusion that the dredging program and upland reuse will not result in the degradation of the site and the potential for significant risk to health, safety, public welfare, and the environment.

The applications, at numerous points, reference other documents to support the conclusions presented; e.g. the U.S. Army Corps of Engineers and Massachusetts Department of Environmental Protection (DEP or the

Department) "approved"[1] Sediment Sampling and Analysis Plan (SSAP); the Tier II and Tier III sampling results, etc. While the City was able to obtain some of this information, much of it, such as the Tier II and Tier III results, has been intentionally removed from public view through assertions of "confidential business information" and "trade secrets." The applicant has the right to invoke such protections, if appropriate, but that invocation removes that information from any consideration by the public and the applications must be evaluated as if that information did not exist. This omission, therefore, renders them significantly deficient. Such information cannot at once be relied upon and then withheld from the public review process required by the Water Quality Certification regulations at 314 CMR 9.00 and the Waterways regulations at 310 CMR 9.00.

The following comments are presented under specific subject categories, rather than by individual application, given the commonality of issues presented and the requirements that must be met by WCE for all of the applications:

Dredged Materials

Historical Context

The applications claim that dredging in Mount Hope Bay and Fall River is not unusual and describe the dredging of New Bedford Harbor to remove PCB and heavy metal contamination as illustrative of the mundanity of this activity. In fact, this dredging project was part of an almost two-decade remediation of a federal Superfund site; the New Bedford Harbor PCB Site, a fact which is omitted from the applications. Therefore, it seems inappropriate to use the New Bedford Harbor dredge project to illustrate how commonplace the dredging of in excess of 2.3 million cubic yards (cys) of contaminated materials is or to conclude that such an activity presents no risk of significant impacts to Fall River.

Maintenance and Improvement Dredging Allocations

Generally, the allocations between maintenance and improvement dredging volumes have been mischaracterized. The applications propose dredging depths between 37 ft. below mean lower low water (bMLLW) to 41 ft. bMMLW to accommodate LNG tankers. As observed by DEP and the

[1] The word "approved," as used by WCE in its applications regarding the SSAP, is inaccurate when referring to DEP's role in implementing the SSAP. Included with these comments as Attachment 1 is the January 2003 letter issued by DEP to Epsilon Associates, Inc. which is limited in its approval to the statement that the plan "appears adequate for initial sediment characterization."

Massachusetts Office of Coastal Zone Management (MCZM), dredging depths greater than 35 ft. bMLLW is categorically improvement dredging; see Attachment 2; Comments of DEP and MCZM, page 3. Accordingly, the project is subject to the applicable requirements of the Wetlands Protection Act and implementing regulations at 310 CMR 10.00 as well as the Surface Water Quality regulations at 314 CMR 4.00.

In addition, the applications state that 60,000 cys, to be dredged from the Turning Basin, is maintenance dredging providing a public benefit at no cost to Fall River, rather than improvement dredging. This conclusion is based upon the claim that prior dredging activities had occurred in the vicinity. However, when this statement, which appears in the 4/26/04 WQC application, is compared to the licensing history provided in the c. 91 permit application, it appears to have no basis. Section 2.2 of the c. 91 permit application states that no license or dredging plan had been discovered by the applicant concerning prior dredging in this area.

Sediment Sampling and Characterization

Generally, the information provided in the applications concerning the chemical characterization of the dredged materials is insufficient to issue the requested certifications/permits. Simple examples of information omitted from the applications, but nonetheless required by 314 CMR 9.07 include the following:

Sediment sampling results are not compared to the thresholds required by the water quality certification regulations;

The laboratory results are not provided in the applications;

The analytical results are predicated upon statistical comparisons, not upon the required regulatory criteria.

For these reasons alone, the applications are technically incomplete.

There are specific, significant omissions and data gaps throughout the dredged materials characterizations provided in the applications, as follows:

East Channel

The applications propose to dredge 400,000 cys of contaminated material from the East Channel for upland reuse. The applications do not include information concerning any sampling or analysis performed in this area except for the work done by MCZM in 1997 as part of the Dredged

Materials Management Program (DMMP). The DMMP was an independent project with goals and objectives that were unrelated to the unrestricted filling of public tidelands and upland placement at an active disposal site, as intended by WCE. Consequently, the MCZM samples were not analyzed for the full suite of contaminants required by the Water Quality Certification regulations and the Massachusetts Contingency Plan, which could result in deterioration of water quality and degradation of conditions at the disposal site. The DMMP program was not designed to respond to this use or this disposal site.

The analyses performed by MCZM in 1997 are not reflective of current levels of contamination, seven years later. Further, the levels found by MCZM differ from those reported in the applications because the results were averaged by WCE; they were not individually reported, as was done by MCZM and as is required by the Water Quality Certification regulations. In fact, the MCZM data found contamination that included MCP S-1 exceedances for several contaminants of concern, including mercury. This finding in itself requires further sampling, given mercury levels in and around Fall River due to the proximity of the Brayton Point Power Plant.[2]

The point to be emphasized here is that the information concerning dredged materials originating in the East Channel is insufficient to allow the Department to issue the requested certifications and permits. Without the inclusion of current sample data for the required suite of analytes, reported in a manner that allows direct comparison to DEP regulatory thresholds, the applications do not comply with the regulatory requirements of the Water Quality Certification program, the Waterways program, or the Massachusetts Contingency Plan.

Sampling Program Inadequacies

The SSAP established standards DEP determined to be adequate for initial sediment sampling. WCE represents the SSAP standards to be

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[2] Brayton Point is a coal-burning generation unit that has been identified by the Department to be the most significant stationary source of mercury emissions of all coal-fired power plants in Massachusetts; see Bureau of Waste Prevention Background Document and Technical Support For Public Hearings On Proposed Amendments to 310 CMR 7.00 et. seq.: 310 CMR 7.29 Emission Standards for Power Plants (October 2003). Brayton Point, as reported by DEP, is annually emitting approximately 400lbs/year of mercury in the vicinity of Fall River. DEP's new mercury standards; 310 CMR 7.29; require Brayton Point to reduce its annual mercury emissions by 85% by 2006 and by 95% by 2012. This is a significant reduction going forward, but it cannot address existing mercury contamination in the environment. Further, until those reductions occur, Fall River will continue to be subject to exposures of significant levels of mercury. The potential risk of cumulative mercury impacts should be assessed prior to the Department issuing any approvals issued for this project.

analogous to satisfying the requirements of the Water Quality Certification program, the Waterways Program, and the Massachusetts Contingency Plan, which was not the scope or purpose of the SSAP. Even if that had been the case, the information provided in the applications demonstrates that many of the SSAP requirements were not met (see below), the utility of the MCZM samples was mischaracterized in the applications (as discussed above and below), and upland reuse would require additional site and sediment characterization not included in the SSAP (see below).

SSAP Requirements

The SSAP contemplated a sampling scheme that would achieve a density of one sample for approximately every 20,000 – 40,000 cys of dredged material removed from the Federal Channel. Based upon the information provided in the applications, sample density achieved by WCE was one sample for approximately every 58,000 cys of dredged material.

A total of 53 sample cores and 103 individual samples were proposed under the SSAP. The applications recite that 43 sample cores were collected and only 55 samples were analyzed, almost 50% less than what DEP considered "adequate for initial sediment characterization" in its January 2003 letter concerning the SSAP.

The SSAP laid out specific quality assurance/quality control procedures, which included sample preservation and archiving. Based upon the information provided in the applications, this did not occur for many of the samples collected.

The SSAP expressly provided for initial sediment characterization; additional requirements were inevitable depending upon the data collected, total cores, and ultimately, the placement, reuse or disposal alternatives determined for the proposed project. The applications present the SSAP as encompassing the final regulatory requirements for the proposed project. Such is not the case, as a review of the SSAP reveals. Even if WCE had complied with every element of the SSAP, further information, including but not limited to characterization of the proposed upland reuse site, would have had to be developed in order for the Department to issue the requested certifications and permits.

MCZM Samples

The applications mischaracterize the utility of the data collected by MCZM. The applications present the MCZM data as sufficient to meet the regulatory requirements for the proposed upland reuse as fill material.

The sampling and analysis performed by MCZM, as set forth in the SSAP, was not performed to demonstrate that the dredged material was suitable for upland reuse as fill.[3] The purpose of the MCZM program was to identify disposal options for dredged materials unsuitable for unconfined ocean disposal. What MCZM found, as set forth in the SSAP, was that almost 86% of the dredged material predicted to be generated from the Federal Channel would not be suitable for unconfined ocean disposal and would have to be disposed of through other mechanisms; landfill, other upland, Confined Aquatic Disposal (CAD) and/or Confined Disposal Facility (CDF). MCZM did not consider upland reuse as fill at the proposed, active c. 21E disposal site as part of this program. Therefore, the sampling and analysis program conducted by MCZM is unsuitable for determination of the acceptability of upland reuse of the dredged material as fill, as proposed.

Additional Upland Site Characterization

The SSAP provided that upland reuse as fill material would require specific characterization of the receiving site(s). As discussed in the next section of these comments, the applications are technically and substantively incomplete, as they fail to address the requirements of the Massachusetts Contingency Plan; 310 CMR 40.0000; applicable to the proposed filling and LNG Terminal development.

Upland Reuse, Chapter 21E and the Massachusetts Contingency Plan

The Site proposed in the applications for development and construction of the LNG Terminal is an active disposal site, regulated by the Department under c. 21E and the Massachusetts Contingency Plan (MCP). The Site is tracked by the Bureau of Waste Site Cleanup under RTN Numbers 4-0930 and 4-0749, information that is not included in the applications. The Site is subject to a Tier IC permit and is currently in Phase V, operating under Remedy Operation Status.[4]

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[3] If the dredged materials are determined to be integral to the remediation currently ongoing at the proposed upland reuse site under the Massachusetts Contingency Plan, they could be subject to the Department's requirements for Beneficial Reuse Determinations. The proposed regulations implementing the beneficial reuse program are currently in the public comment period (recently extended). If the proposed regulations do not become final before the question of use of this material as a substitute for fill comes before the Department, they will certainly be relied upon as interim guidance. The potential applicability of these requirements is not mentioned in the applications.

[4] Remedy Operation Status is defined by the MCP, at 310 CMR 40.0893, to be applicable to a disposal site where a remedial system that relies upon Active Operation and Maintenance is being operated for the purpose of achieving a Permanent Solution. This allows a site to continue progress, toward a level of No Significant Risk, but extends the MCP five-year

The Site was originally owned by the Shell Oil Company and is contaminated with oil and hazardous materials at concentrations regulated by the MCP. There is a private (non-MCP) environmental restriction recorded with the deed for the Site that limits the placement of fill materials at the Site to non-hazardous substitutes for clean fill, as approved by the Department, and prohibits any activity at the Site that would be inconsistent with maintaining a condition of No Significant Risk to health, safety, public welfare or the environment during any foreseeable period of time.

The Site is currently undergoing remediation for light non-aqueous phase liquid (LNAPL) traveling on the groundwater at concentrations greater than 0.5 inches (MCP Upper Concentration Limits) and, in some areas, at concentrations greater than 2 ft. There is an active treatment system in operation, consisting of 18 recovery wells, piping and holding tanks. The purpose of the system is to remove the LNAPL and to prevent its migration into the Taunton River.

The Department's Proposed Revised Dredging Regulations (2003), which codify the Department's long-standing interpretation and policy concerning the use of contaminated dredged materials at 21E disposal sites, provide that such materials may only be brought from another location to a disposal site as an integral part of the remedial action being conducted at the site. Reuse of in excess of 2.3 million cys of contaminated dredged materials is not part of the remedial action being implemented for this Site, as set forth in the Phase IV and Phase V Reports and LSP Opinions submitted to the Department.

Further, the Proposed Revised Dredging Regulations integrate the anti-degradation requirements of the MCP. The MCP prohibits the placement of materials contaminated at concentrations less than reporting concentrations at any location where the cumulative effect would be to increase contaminant concentrations above release notification thresholds. This anti-degradation requirement; 310 CMR 40.0032(3)(a)(b); applies to the reuse proposed in the applications. One of the fundamental inadequacies of the sampling program conducted is that WCE failed to perform analyses of all of the sediment samples for contaminants known to be present at the upland site, such as lead and individual petroleum hydrocarbons. While many of the sediment samples revealed contamination with these known constituents, because all samples were not analyzed for all known contamination, anti-degradation is a

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deadline for achieving a permanent cleanup. This status is conditioned upon the elimination of substantial hazards, careful monitoring and maintenance, regular reporting to DEP (every six months) and ensuring that no action is taken that could affect the remedial operations such as to trigger potential or actual Significant Risk.

known concern that has been expressly identified by DEP but has not been addressed by WCE. For a full discussion and explanation of the applicability to these applications of the Proposed Revised Dredging Regulations and the MCP Requirements, see Attachment 3: 9/12/03 correspondence between Steven G. Lipman, Commissioner's Office, and Larry Brown, NRG. See also Attachment 4: DEP Dredged Material Regulatory Framework.

Current Site Conditions and Anti-Degradation Requirements

The applications provide no information concerning contamination resident at the disposal site proposed to be the locations for the reuse of the dredged materials and the development of the LNG Terminal beyond the original assessment conducted by the Shell Oil Company. Without demonstrating that the proposed reuse will not create a potential Significant Risk and will not violate the anti-degradation requirements of the MCP, the Department cannot conclude that the pending applications are complete nor can the Department issue the requested approvals.

Dredging Program Management

The applications are incomplete concerning characterization of the impacts associated with implementing the proposed continuous, thirty-six month, twenty-four hour/day dredging program. Alternatives to this program which recognize state and federal fisheries and benthic habitat protection requirements are not included in the applications.

The impacts upon Essential Fish Habitat (EFH) will be discussed subsequently in these comments. What is of note about this proposal is how WCE emphasizes the interdependence of each component of the dredging program and how unworkable the program is if any one component does not proceed as scheduled. If a barge becomes unstable, a bucket malfunctions, a scow swamps, the result is cessation of the program right at that point. Piles of contaminated materials would be left in place, increasing turbidity and backflow, attracting vectors and emitting dust and odors. All of these concerns are dismissed in the applications as not being of significant concern. No comprehensive plan for materials management, including, accumulation, stockpiling, erosion control, dust, odor control, or stabilization, if any one of the interdependent processes fails to function, is provided in the applications. Considering the impacts upon water quality, human health, and quality of life, dismissing these issues as not raising significant concerns is a serious deficiency in the applications. Failing to present any practical alternatives, or to propose avoidance and minimization mechanisms means failing to comply with the most basic requirements of the Water Quality Certification Program and the Waterways Program.

This serious inadequacy is not limited to the issues raised before the Department in these applications. On 2/5/04, the Federal Energy Regulatory Commission (FERC) asked WCE to provide a figure or a table listing each dredging area and associated dates and duration of activities in each area as related to reuse production and management. The response to the FERC, which is not included in the applications, is that, "Estimating and defining the duration and schedule of the physical dredging by defined location or dredging element at this point would be difficult, particularly with upland reuse, due to uncertainties in balancing the three integral production rates – dredging – dredged material stabilization and upland reuse/stabilized dredged material placement." WCE's full response to the FERC is included here as Attachment 5.

The applicant, based on the FERC response, cannot develop a management plan. The response to the FERC goes on to state that, without implementing the proposed schedule, which, as discussed later in these comments, violates the Waterways Regulations' Resource Protection Requirements; 310 CMR 9.40(2); the dredging program cannot be implemented.

Standards to Preserve Water-Related Public Rights

The applications fail to demonstrate that the project shall preserve rights held by the Commonwealth in trust for the public to use tidelands, as required by 310 CMR 9.35. Specifically, the applications demonstrate that the project will significantly interfere with public rights of navigation, public rights of free passage over and through water, public rights of fishing and fowling in tidelands, and public rights of on-foot passage.

Resource Protection and Essential Fish Habitat

WCE has proposed scow overflow Time of Year limitations between January and April as equivalent to the protection provided the multiple fisheries resources by the prohibition in the Waterways regulations on dredging and dredged materials disposal between March 15th and June 15th. The applications do not propose an alternative that complies in any respect with the Waterways regulations concerning this prohibition.

310 CMR 9.40(2)(a) provides that no dredging activity may be performed between March 15th and June 15th of any year except upon a determination by the Division of Marine Fisheries, pursuant to M.G.L. c. 130, § 19, that such an activity will not obstruct or hinder the passage of fish. Not only has the Division of Marine Fisheries NOT provided such a determination,

it has submitted extensive comments concerning the significant, permanent, negative impacts the project will have on the fisheries. See Attachment 7.

In addition to the March 15 – June 15 prohibition on dredging activities, the regulations require that dredging activities shall minimize adverse impacts on shellfish beds, fishery resource areas, and submerged aquatic vegetation. The applications fail to demonstrate how the impacts that will inevitably result from the proposed, continuous thirty-six month, twenty-four hour/day dredging program will be avoided or minimized.

Rather than restate the objections raised by NOAA Fisheries in its 5/21/04 comments to the Department, as well as the comments submitted by the Massachusetts Division of Marine Fisheries (DMR) on its June 8, 2004 correspondence to the Department concerning the proposed dredging program and the impacts upon fisheries and fisheries' habitat, copies of those comments are included with these comments as Attachment 6 and Attachment 7, respectively, and are specifically incorporated here.

The primary points of these comments should, however, be revisited, because of their significance and the range of concerns raised by NOAA Fisheries and DMF:

NOAA Fisheries:

The Taunton River/Mount Hope Bay Complex has been designated as EFH for a number of federally managed species, including the commercially and recreationally important winter flounder. This area serves as an important winter flounder spawning and juvenile development habitat. In addition, the Taunton River serves as an important migratory pathway for a number of anadromous fishery resources such as alewife, blueback herring, rainbow smelt, and American shad. NOAA Fisheries is concerned that suspended sediments resulting from the construction and operations associated with the proposed project will have adverse effects on EFH and living marine resources. In addition, volumes of dredged material have been underestimated and, therefore, a reasonable assessment of disposal options have not yet been presented.

The depth of winter flounder spawning areas has been underestimated in the dredging modeling report. Throughout the 401 Water Quality Certification document and the ACOE 10/404 permit application [as well as in the present c. 91 permit application], the applicant has stated that winter flounder spawning only occurs in water depths less than five meters. Due to the wide variability of spawning activity, NOAA Fisheries maintains that utilizing a 5 meter depth criterion for winter flounder spawning as an input to

the SSFATE [dredging] modeling program does not adequately assess the potential impacts on the resource.

The applicant does not adequately discuss or consider potential impacts on anadromous fishery resources resulting from dredging or facility operations. Construction activities and associated sediment plumes have the potential to impair migration of anadromous species and may affect egg, larval, and juvenile stages of development for species that spawn in the project footprint area.

The proposed dredging project has potential impacts on shellfish resources through both direct losses from dredging operations as well as sediment-related impacts prior to and during spawning periods.

DMF:

Sediment modeling performed to evaluate potential fisheries impacts from dredging and construction underestimates these impacts. The amount of field data collected for use in the model is inadequate when attempting to model for an activity that is proposed to occur for up to three years.

Underestimation of total impacts resulting from the use of this [sediment] model does not support the proposed dredging/construction restrictions offered in place of traditional time-of-year (TOY) windows and project sequencing within the Taunton River. Appropriate TOY windows would be as follows:

Anadromous Species:

Alewife; inward migration – mid-March through mid-June
outward migration – June 15 through October 1

Atlantic sturgeon; inward migration – April through June
outward migration – June through November

Blueback herring; inward migration – April 15 through July 30
outward migration – September through early November

Rainbow smelt; inward migration – March 1 through May 15

White perch; inward migration – March through May

Catadromous Species:

American eel – elver (juveniles); inward migration – March 15 through June 15

Shellfish:

American oyster, spawning – mid-June through September 15

Quahog, spawning – mid-June through September 15

Soft-shell clam, spawning – May through October

Winter flounder:

Spawning and larval development – mid-January through May

Juvenile settlement and development – May through September

Description of potential winter flounder spawning habitat is incorrect and greatly underestimates the amount of area that may be permanently altered.

The claims in the application that the Turning Basin area is too deep for successful winter flounder spawning and egg deposition have no basis.

The application does not address the non-excavation impacts of dredging, including placement, management, and removal of spuds, anchors, and chain sweeps, which will affect an area many times larger than the dredge footprint, especially for quahog habitat.

The application fails to discuss cumulative impacts of dredging and construction on highly stressed species and habitat. Planned dredging will result in permanent loss of productive shellfish habitat.

Claims that dredging/construction impacts will be temporary cannot be supported when discussing a nearly continuous three-year construction cycle, followed by the weekly passage of ships large enough to resuspend sediments along the entire portion of the Mount Hope Bay/Taunton River passage.

National Wild and Scenic Rivers Program

The applications, in discussing natural resource impacts, neglect to include the information that the Taunton River, from its headwaters to Mount

Hope Bay, is under study for inclusion in the National Wild and Scenic Rivers System, which triggers the protections of Section 7 of the Wild and Scenic Rivers Act. This status will be considered by the U.S. Army Corps of Engineers in its review of the Clean Water Act Section 404 permit application required for the project, and requires consideration as a component of the Department's water quality certifications as well.

Fall River Harbor and Downtown Economic Development Plan

The applications refer to Fall River's Harbor and Downtown Economic Development Plan as being supportive and consistent with the proposed project, citing to the Plan's goal of redeveloping the Shell Oil Site. The applications fail to include the complete objective articulated by Fall River: Development of the Shell Oil Site for a range of diverse uses, including cargo (palletized goods, lumber, bulk steel, automobiles). These intended uses would become impossible if the LNG Terminal, with its extensive water and ground traffic, safety, and energy security exclusion zone requirements, were constructed at this site. Public passage, along with virtually every other use contemplated by the Fall River Plan; industrial, commercial, recreational; would be foreclosed, leaving Fall River with few economic and public benefit development alternatives.

This major negative impact upon the City of Fall River was set forth to the FERC in the 1/30/04 correspondence submitted by Mayor Edward Lambert, which is not included in the applications, for the Department's consideration. The Mayor's letter5 states:

> Weaver's Cove needs to acknowledge that Fall River has a Harbor and Downtown Economic Development Plan prepared by the Cecil Group, Inc. In that plan, as mentioned above, the Shell site is included when speaking of major redevelopment of the waterfront. An LNG facility does not fit in well with the city's plans for redevelopment of the overall waterfront and with the Shell parcel in particular.

The proposed project does not appear to be consistent with the goals and objectives determined to be in the public benefit and serving a proper public purpose, as articulated by Fall River's Harbor and Downtown Economic Development Plan.

Security and Exclusion Zones

The applications include no analysis or consideration of the detriment that will be imposed upon Fall River as the result of the safety and security zones imposed upon energy and critical infrastructure projects. These zones

are inconsistent with the use of a designated port area and will act to exclude other uses and constrain access to both the land and the seaward approaches now enjoyed by Fall River.

The U.S. Coast Guard, under its authority codified at 33 CFR Part 165, has required the establishment of safety zones, security zones, and regulated navigation areas on an expedited basis, for all critical energy infrastructure projects, for the past three years. As set forth in a recent rulemaking to safeguard LNG tankers in Cook Inlet, AK, the Coast Guard is establishing permanent security zones, including in these zones LNG tankers, marine terminals, and the maritime community within the immediate vicinity of unloading, docking, and storage facilities. The security zone established for the Cook Inlet LNG facility included a 1,000-yard radius security zone around tankers while moored at the pier.

Such security zones are antithetical to public access, diverse uses, or an expansive economic base and are contrary to the goals and objectives articulated by Fall River for its citizens in the Harbor and Downtown Economic Development Plan.

Conclusions

The applications presented to the Department are technically and substantively incomplete in significant areas. They fail to comply with the basic regulatory requirements of the Water Quality Certification program, the Waterways program, and the Massachusetts Contingency Plan.

The applications fail to provide information integral to informed public review and fail to include information relevant to the Department's considerations that has been provided to other agencies; e.g. FERC and the U.S. Army Corps of Engineers.

The applications fail to provide reasoned alternative analyses and they discount the significant risks to health, safety, public welfare, and the environment inherent to the proposed project.

Attachment 3

Shell Oil Products US
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Internet http://www.shell.com

Fall River Conservation Commission
1 Government Center
Fall River, MA 02722

July 26, 2004

Your ref: Comments of Shell Oil Products U.S., and Shell Oil Company re:
Notice of Intent- Weaver's Cove Energy, LLC
LNG Terminal Development and Dredging of the Mount Hope Bay- Fall River Harbor Federal Navigation Channel and Turning Basin, Fall River, MA

Dear Commissioners,

Enclosed, please find the referenced Comments of Shell Oil Products US and Shell Oil Company submitted in regards to the above referenced Notice of Intent.

Sincerely Yours,

Johnna S. Van Keuren

Johnna S. Van Keuren
HSSE Manager – SOP US Distribution

Enclosure

cc: Mr. Pierre Espejo
Shell Oil Company

SHELL OIL PRODUCTS US' AND SHELL OIL COMPANY'S COMMENTS TO THE FALL RIVER CONSERVATION COMMISSION TO WEAVER'S COVE ENERGY'S NOTICE OF INTENT

Shell Oil Products US and Shell Oil Company (collectively "SHELL") hereby submit public comments to the Fall River Conservation Commission ("FRCC") on the above subject Notice of Intent ("NOI") by Weaver's Cove Energy ("WCE"). WCE is currently proposing to construct an LNG facility on a 73-acre site on the Taunton River ("Site").

WCE's NOI repeatedly states that the Site is a "brownfield" site. It is not. The property owner Jay Cashman, Inc. is currently using the property for construction activities, is paying the taxes and has been and remains a solvent owner throughout its possession of the property. Furthermore, SHELL is currently performing environmental response actions on the Site in accordance with M.G.L. c.21E and 310 CMR 40.00 (the Massachusetts Contingency Plan ("MCP")) in relation to release tracking number ("RTN") 4-0749.

SHELL is not opposed to the construction of LNG facilities, however SHELL has significant concerns regarding both the effect of WCE's proposed activities associated with the project on SHELL's ongoing response actions and the activities potential to degrade the Site. SHELL is concerned that the proposed activities fails to adequately address two of the interests of the Wetland's Protection Act ("Act)" under M.G.L. c.131, Section 40. The interests are the protection of groundwater and protection of surface water. Furthermore, WCE has failed to adequately address substantially equivalent economic alternatives that could pose less risk to the environment. SHELL has also submitted public comments to WCE's applications for Chapter 91 Waterways permit, 401 Water Quality Certification, and to WCE's application with FERC.

In particular, SHELL is concerned about its ability to recover existing light nonaqueous phase liquid ("LNAPL") and the WCE's ability to prevent migration of LNAPL to areas covered under M.G.L. c.131 §40. SHELL is also concerned that the contaminants contained in the dredged material may cause a reportable release under M.G.L. c.21E that would adversely impact the ongoing response actions and further degrade the Site.

These concerns result from the WCE's failure to address directly and satisfactorily the potential environmental concerns arising from its proposed activities. The specific goals of SHELL's remediation plan are to prevent LNAPL from migrating into the Taunton River and to reduce the thickness of the LNAPL, by removing subsurface petroleum products, to less than 0.5 inches across the Site while maintaining a condition of no significant risk.

Since 1992, a groundwater pump and treat system along with LNAPL recovery has been implemented to prevent the LNAPL migration to the Taunton River. The current system, as set up, is at equilibrium and prevents the flow of LNAPL into the Taunton River. SHELL's remediation system was designed and accepted by MADEP based on its ability to clean up existing contamination and to prevent the release of such contamination to the Taunton River under current conditions. SHELL is also the holder of the NPDES permit for the discharge from its remedial system. Contrary to the implications in the NOI, it is not within WCE's authority to alter SHELL's remediation system discharge in accordance with SHELL's NPDES permit.

To enable deepwater ships to reach the LNG terminal, WCE expects to dredge more than two million (2,000,000) cubic yards of sediment. All, or substantially all, of the dredged material is being proposed to be deposited as fill on the Site, in thicknesses ranging from 25 to 120 feet. WCE admits in its Chapter 91 Permit Application that such deposit would adversely affect the remedial work being performed at the Site. Placement of any type of fill on the Site necessarily requires changes to the existing wells and other remedial measures and equipment on the Site. It would also likely increase the intensity and variety of contaminants on the Site, thereby necessitating further remedial activity. Further, the contaminants from the dredged spoils may leach into the groundwater and thus further disturb or interfere with the current response actions and subsequently violate the Act amongst other environmental laws and regulations.

While the manner in which the placement of the dredged spoils will alter the LNAPL plume is unknown, it may significantly increase LNAPL migration simply by virtue of the proposed volume. In essence, the sheer weight of the cement-bonded dredged spoils may force LNAPL away from its current location toward environmental receptors. The current monitoring well network and groundwater recovery system has been designed to respond to *existing* Site conditions, but this design will likely be inadequate to address the changed conditions caused by the dredged spoils.

Also, in order to perform the activities WCE proposed in the NOI, SHELL will have to shut down its remediation system, in whole or in part for the duration of the construction. The system was not designed, nor is it approved for, a shutdown of the remediation system or an increased hydraulic pressure on groundwater conditions. Without the remediation system in place, as designed, the LNAPL may no longer be contained on the Site and may travel toward and discharge into the Taunton River.

SHELL is also concerned that the proposed deposition of the dredged spoils is likely to increase the quantity and variety of contaminants at the Site. WCE's studies show that the two million cubic yards of sediment to be dredged contain substances such as beryllium, arsenic, lead, mercury, zinc, copper, and cadmium, as well as various polynuclear aromatic hydrocarbons ("PAHs"), polychlorinated biphenyls ("PCBs") and pesticides. The potential consequences to the Site of receiving these additional contaminants as part of the massive deposition of dredged spoils are, at this time, unstudied and unknown. WCE's sediment sampling is neither sufficiently thorough nor detailed enough to assess adequately the impacts of placing the dredged spoils on the Site.

The risk assessment undertaken by WCE suffers from several fundamental flaws, including: (1) the sampling of the dredged material is insufficient and fails to appropriately address the potential for a release condition from the contaminants contained in the dredged sediment; (2) it inadequately defines the amount of dredged spoils that may be placed on the property; and (3) the risk assessment fails to demonstrate the safety of mixing the dredged spoils with the cement.

WCE acknowledges the presence of metals in sediments above the MADEP standards for Background Levels in Soil Associated Fill Material. The addition of these contaminants to the Site could be expected to degrade Site conditions and increase the Site

risk. WCE proposes to stabilize the dredged sediment by mixing it with cement before placing it on the Site. However, WCE has not conducted Toxicity Characteristic Leaching Procedure ("TCLP") analyses on the stabilized dredged material. TCLP analysis is needed to determine whether stabilization will succeed in preventing leaching of all sediment contaminants.

WCE has also not analyzed a sufficient number of samples from the Taunton River. The chemical and physical properties of sediment can vary significantly even within short distances. WCE's method of taking one core sample out of each 58,139 cubic yards of dredging materials to be deposited on the Site is far short of what is needed to accurately gauge the impact on the Site. In addition, WCE has not sufficiently addressed the potential for organic compounds in the sediment (*i.e.*, volatile organic compounds ("VOCs"), pesticides, PCBs and PAHs) to impact groundwater and groundwater geochemistry adversely. Stabilization is ineffective for immobilizing these compounds, and WCE offers no alternative method for treating these organics.

If FRCC allows the upland placement of dredged spoils onto the Site, to avoid depositing hazardous or toxic material or material that poses an unacceptable risk on the Site, WCE should be prohibited from depositing any material that has not previously been both (1) dewatered on a barge off-Site, and (2) batch-tested (including TCLP) to insure that contaminants in the sediment do not leach to groundwater or surface water. Such conditions should apply regardless of the source of fill used by WCE.

Another serious concern arises from the flawed alternatives analysis presented in Section 2.6 of the NOI. The alternatives analysis presented is limited to a discussion of the proposed facility's various physical configurations. The Act, however, requires the WCE to prove that there is "no practical and substantially equivalent economic alternative" to the project and that the project will have no adverse impact on the Riverfront Area. 310 CMR 10.58(4). The Act requires that the alternative analyses consider cost, current technology, proposed use and logistics. M.G.L. c. 131 §40. No cost analysis is provided in the NOI. While the NOI does identify alternate technologies that would make the proposed shoreline configuration practical and less intrusive on the resource areas, the alternative analyses needs to demonstrate that there is no other alternative that would cause less impact to any resource areas and is still economically viable. 310 CMR 10.58(4).

The NOI also skirts or omits other important elements of the alternatives analysis. For example, the NOI only touches on the logistics requirement by stating that a salt marsh replication plan is being developed with the USACE. The regulations specifically require a 1:1 to 2:1 replication. 310 CMR 10.58(5)(g). Similarly, the NOI fails to consider the required "no activity" option as well as any other potential uses of the property that would properly balance the goals and responsibilities of the Act and 310 CMR 10.00 while complying with legal restrictions on development. Until a satisfactory salt marsh replication plan is presented (and the relevant areas are controlled by WCE) and until the "no activity" or alternate-use options are more fully considered, the analysis presented in the NOI is administratively and practically incomplete.

In this regard the Commissioners should also note that, in WCE's Army Corps 404 filing, WCE identified several more viable practicable alternatives to the upland placement of

dredged spoils on the Site. The alternatives included: (1) offshore disposal in open ocean or island/habitat creation; (2) confined aquatic disposal ("CAD"); (3) and placement in a confined disposal facility ("CFD"). Depending on the results of WCE's Tier III analysis, either open ocean or island/habitat creation would be less expensive than the proposed activities. Alternatively, if the results do not allow this option, the remaining options are not significantly more expensive than the proposed activity.

Accordingly, the FRCC should withhold the approval of the proposed activities and request WCE to modify the activities to demonstrate satisfactory compliance with M.G.L. c.131, Section 40. In particular, WCE should further consider the alternatives it proposed in its Army Corps application to placing the dredge spoils on the Site. These alternatives would not have the environmental concerns identified by SHELL associated with upland disposal on the Site. As such, if the WCE cannot satisfactorily demonstrate that its activities will not violate the aforementioned statutes and regulations and due to the substantial potential environmental impact caused by the placement of the dredged spoils on the Site as described more fully above, the "CAD" or "CDF" alternatives should be required.

If FRCC allows the placement of the dredged spoils on the Site, the FRCC should require WCE to redress satisfactorily each of the issues raised within, including but not limited to a demonstration that there will be no interference with the M.G.L. c. 21E remediation effort as it may evolve, batch sampling and a pump/treat system to ensure containment of any contaminants to and from the Site, and such other restrictions and precautions as are required to protect human health and the environment.

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

WEAVER'S COVE ENERGY, LLC	)	DOCKET NOS. CP04-36-000
	)	CP04-41-000
	)	CP04-42-000
MILL RIVER PIPELINE, LLC	)	CP04-43-000

AFFIDAVIT OF CHRISTOPHER J. FINLEY

1. My name is Christopher J. Finley. I am an Associate at NewFields Princeton, LLC, an environmental consulting and engineering firm specializing in comprehensive data analysis for the purpose of characterizing contaminant sources, distribution and transport mechanisms. I am a Civil Engineer and a graduate of Rochester Institute of Technology. I have practiced in the environmental consulting and engineering field for the past 17 years and have extensive experience in site characterization and remediation associated with contaminant releases. My curriculum vitae is provided as Attachment CF-1.

2. I have been in charge of over 300 remediation projects across the United States. I serve as a strategic planner and data analyst for more than a dozen Fortune 50 firms. I provide strategic planning, source identification, source contribution, site characterization and remedy selection services to potential responsible parties on sediment impairments located in the Houston Ship Channel and Lake Superior. The sediments are impacted by polynuclear aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, pesticides, dioxin and other contaminants. Management, treatment, and land application of this material is being considered.

3. I was retained by Shell Oil Products, US ("SOPUS") in connection with the application of Weaver's Cove Energy LLC ("Weaver's Cove") in this proceeding to construct an LNG terminal in Falls River, Massachusetts. I was asked to analyze the impact of Weaver's

Cove's proposal to deposit over two million cubic yards of dredging spoils on land (the "Site") where SOPUS is engaged in environmental remediation activities pursuant to requirements imposed by Massachusetts state law, *i.e.*, pursuant to the Massachusetts Contingency Plan ("MCP").

4. The specific goal of SOPUS' remedial activities at the Site is to reduce light nonaqueous phase liquid ("LNAPL") mobility and to reduce LNAPL thickness to less than 0.5 inches across the Site while maintaining a condition of no significant risk.

5. A potential risk is that LNAPL migrates to the Taunton River. The groundwater encountered at the Site is classified as category GW-3 as described in section 310 CMR 40.0932 of the MCP. This category is applied to groundwater that is a potential source of discharge to surface water. In order to prevent risk to the Taunton River, which is located adjacent to the western property boundary, and to meet remedial goals, a groundwater pump and treatment system along with LNAPL recovery has been in operation since 1992.

6. NewFields conducted a comprehensive Site-wide remedial investigation between 1999 and 2000 in order to develop an appropriate Site remedy based on current Site conditions, risks to potential receptors and taking into account future activity use limitations (AULs) and Deed Restrictions which are outlined in the Purchase and Sales Agreement between Jay Cashman Inc. and Shell Oil Company. These remedial investigation data combined with the future Site AULs and Deed Restrictions were relied upon and used to establish the Site Method III Risk Characterization, Phase III Remedial Action Plan and Phase IV Remedy Implementation Plan. The selected remedy consisted of the following:

- Design, installation and operation of individual LNAPL and groundwater recovery pumps on the northern property.

- Manual, passive (adsorbent socks) and/or vacuum truck recovery and monitoring of LNAPL in the southern portion of the property.
- Effectiveness Monitoring of LNAPL Recovery until a condition of no significant risk is maintained.

7. The current LNAPL recovery system utilizes product recovery pumps to remove LNAPL. Twelve recovery wells may be operated to mechanically skim the LNAPL and pump it into aboveground holding tanks. Another six recovery wells can recover LNAPL and groundwater, simultaneously or separately. The groundwater, which is currently pumped at approximately 40 gallons per minute, is treated through oil and water separation and activated carbon treatment prior to discharge of the water to the Taunton River in accordance with U.S. EPA NPDES permit exclusion MA0004871. The recovery wells are located across the northern plant area extending approximately 1,000 feet from the dock to the northern end of the bulkhead. The wells are operated in a manner intended to prevent migration of LNAPL to the Taunton River. Manual, passive and/or vacuum truck recovery and monitoring of LNAPL in the southern portion of the Site are from wells located where Weaver's Cove proposes to locate its LNG tank.

8. The remedial goals for the Site consist of: 1) operating the remediation system, 2) cessation of LNAPL recovery at a point when average LNAPL thickness of less than ½-inch exists across the Site, and 3) ensuring that residual LNAPL will not reasonably migrate into the Taunton River. Extraction of groundwater is anticipated to cease within a few years.

9. As I discuss below, the Weaver's Cove dredging plan presents numerous significant problems to the Site and SOPUS' remedial obligations.

- Depositing the dredging spoils may significantly increase LNAPL migration.
- The effects of Weaver's Cove's proposed mixing of cement with the dredging spoils are unknown.

- Weaver's Cove's sampling failed to include sediment samples from the East Channel, and its sampling and sediment testing from the Taunton River is inadequate to identify the risks of the dredging plan.
- Weaver's Cove's analysis of the sediment samples did not cover all the relevant contaminants, and Weaver's Cove inappropriately downplays contaminants that were detected in the samples.
- The Site will be degraded by the dredging spoils.

Depositing the Dredging Spoils may Significantly Increase the Risk of Migration of the LNAPL Plume

10. Containment of the LNAPL plume is one of the key objectives of SOPUS' remediation activities. Weaver's Cove admits that the deposition of 2 million cubic yards of dredging spoils may well affect the horizontal extent of the LNAPL plume. According to the Environmental Resources Management ("ERM") *LNAPL Plume Response to Upland Placement of Dredged Material* report, "The short-term mounding of the water table will lead to mounding of the LNAPL zone and some mobilization of LNAPL radially outward from the fill zone." Furthermore, due to the greatly increased pressure from the dredging spoils ERM states, ".. the localized pore pressure build-ups may result in localized LNAPL mobilization." Weaver's Cove acknowledges that this potential migration of LNAPL must be monitored. However, Weaver's Cove has not adequately analyzed potential migration of the LNAPL plume.

11. How the increased pressure from the dredge spoils will alter the LNAPL plume distribution and migration is unknown and has not been defined by Weaver's Cove. Its assumption that LNAPL will migrate radially outward from the fill zone is not well founded. The pressure exerted on the Site by the dredge spoils will be variable. As a result, the affects on the LNAPL plume extent and migration will also be variable. The current monitoring well

network and groundwater recovery system has been established for many years and is adequate for existing Site conditions, but it is not adequate to address this new and variable condition. The amount of time for the Site to reach steady state conditions following the application of the dredge material is not known. Ensuring that a condition of no significant risk is maintained during this transition and that LNAPL will not migrate to the Taunton River requires increased monitoring and control of the LNAPL plume and groundwater plume beyond the current conditions.

The Effects of Mixing Cement with the Dredging Spoils are Unknown

12. In order to attempt to stabilize the dredged sediments, Weaver's Cove proposes to mix the sediment with cement, possibly on or off site, prior to placing them on the Site. However, Weaver's Cove has not conducted Toxicity Characteristic Leaching Procedure ("TCLP") analyses on the stabilized dredged material. Such analysis is needed to determine whether stabilization will accomplish the intended objective of preventing leaching of sediment contaminants. Sediment sampling results indicate that the maximum lead and mercury concentrations are at such levels that TCLP analysis may fail, resulting in contaminants leaching to groundwater and causing groundwater impacts. There is also evidence that the cement's alkalinity may increase chromium and copper leachability as documented by case studies conducted on similar sediment stabilization projects in the Buffalo River (New York). There is also a risk of salinity increases in the groundwater, due to leaching from the dredging spoils.

13. In addition, Weaver's Cove has provided no information to address the potential of organic compounds in the sediments (*i.e.*, volatile organic compounds ("VOCs"), pesticides, PCBs and PAHs) adversely affecting groundwater. Such compounds cannot be immobilized through stabilization. Further, sediment conductivity levels exceed unlined landfill reuse levels.

Remediation technologies that would be effective at treating the VOCs and PAHs detected in the dredge spoils include soil washing, incineration, and low temperature thermal desorption.

Weaver's Cove Failed to Obtain Sediment Samples from the East Channel

14. Weaver's Cove's sediment sampling is neither sufficiently thorough nor detailed to assess adequately the impacts of placing the dredging spoils on the Site. For example, in addition to the 2,000,000 cubic yards of dredging spoils Weaver's Cove proposes to remove from the Taunton River, its dredging plan suggests that Weaver's Cove will dredge another 400,000 cubic yards of sediment from the East Channel for placement on the Site. According to the *Dredging Program Report (Attachment A*, Section 3.1.2.1*)*, the dredging of the East Channel is necessary to allow additional maneuvering lane widths for LNG transits. Weaver's Cove states in the *Dredging Program Report,* Section 5.3, that it was unaware that the East Channel would require dredging when the *Sediment Sampling and Analysis Plan* was submitted to regulatory agencies in December 2002. Therefore, Weaver's Cove did not collect any samples from the East Channel to assess the composition of the sediment. Instead, Weaver's Cove simply relied on samples that the Massachusetts Coastal Zone Management ("MCZM") collected from the East Channel in 1997.

15. The sparse sampling data set collected by Weaver's Cove does not indicate what kind of contaminants could be contained in the East Channel sediment today.

East Channel Sediment Results Comparison
To Weaver's Cove Average Results

Parameter	MCZM Samples EC-A	MCZM Samples EC-B	WCE Average Results	Percent EC-A Above WCE Average
Metals	*ppm*	*ppm*	*Ppm*	
Barium	NA	NA	34.5	
Beryllium	NA	NA	1	
Lead	120	92	80.1	49.8
Mercury	**2.7**	**1.8**	**1.33**	103.0
Selenium	NA	NA	**1.5**	
Silver	NA	NA	3.5	
PAHs	*ppb*	*ppb*	*Ppb*	
Acenaphthylene	230	140	106	117.0
Acenaphthene	110	50	34	223.5
Fluorene	150	100	53	183.0
Anthracene	670	300	165	306.1
Phenanthrene	700	560	271	158.3
Fluoranthene	1,000	710	483	107.0
Benzo(a)anthracene	**1,300**	**900**	334	289.2
Benzo(b)fluoranthene	**1,600**	**1,000**	355	350.7
Benzo(a)pyrene	**1,500**	**1,000**	409	266.7
Indeno(1,2,3-c,d)pyrene	**820**	590	143	473.4
Dibenzo(a,h)anthracene	190	140	50	280.0
Benzo(g,h,I)perylene	750	530	136	451.5
Pesticides	*ppb*	*ppb*	*Ppb*	
2,4'-DDT	3	2	Not Performed	
2,4'-DDD	5	2.5	Not Performed	
4,4'-DDD	10	2.1	ND (20 ppb)	
Dieldrin	4	0.55	ND (20 ppb)	
Methoxychlor	7	5.4	ND (20 ppb)	
Heptachlor Epoxide	16	0.55	ND (20 ppb)	

* Bolded concentrations exceed S-1 and/or background fill concentrations.

The concentration of certain contaminants in the East Channel is well above the average concentration detected in the Taunton River. Laboratory analyses of the Taunton River sediments did not include all contaminants identified in the East Channel and the East Channel Analyses did not include all the contaminants detected during analyses of sediments from the

Taunton River. These data do not support that the sediment in the East Channel is similar to the sediment in the Taunton River and as a result sediment from the East Channel could therefore pose a significant unknown risk of increasing the contamination on the Site.

Weaver Cove's Sampling and Sediment Testing from the Taunton River is Inadequate to Identify the Risks of the Dredging Plan

16. Weaver's Cove has not analyzed a sufficient number of samples from the Taunton River. Sediment, by nature, can vary significantly in chemical and physical properties even within short distances. This is due to temporal changes in depositional patterns, source contribution, discharge loading, water quality and hydrological variation, as well as by other factors including man-made influences.

17. Weaver's Cove's sampling method entailed taking just one core sample out of each 58,139 cubic yards of materials to be deposited on the Site. The *Dredging Program Report*, Section 5.2.2, indicates "a total of 43 sediment cores yielding 55 sediment samples were collected from within the Project Limits, exclusive of the East Channel, between March 17-24, 2003." This is less than the 103 sediment samples proposed in Weaver's Cove's *Sediment Sampling and Analysis Plan (Table 12)*. The number of sediment samples collected is far short of what is needed to gauge accurately the impact that the dredged material may have on the Site. To avoid depositing on the Site hazardous or toxic material or other material that poses an unacceptable risk, Weaver's Cove should perform a greater density of coring and sampling. Doing so would be consistent with Massachusetts state policy regarding on-land depositing of dredging sediments. The Massachusetts Department of Environmental Protection's ("MADEP") *Interim Policy #COMM-94-007, Sampling, Analysis, Handling and Tracking Requirements for Dredged Sediments Reused or Disposed at Massachusetts Permitted Landfills* ("MADEP Disposal Policy") requires one sediment core sample per 1,000 cubic yards in the case of on-land

dredging deposits. This is a far greater density than the one in 58,139 cubic yard density performed by Weaver's Cove. In addition, the MADEP Disposal Policy, Section 4.0, requires that project areas that may be affected by local sources of contamination (i.e. combined sewer overflow, storm drain outlets, boat repair docks, fuel docks, etc. or where historic releases of OHM have occurred) must be specifically targeted in the sampling plan. Weaver's Cove conducted a Tier I Evaluation of known contaminated sites that was provided within the *Sediment Sampling and Analysis Plan* and identified hundreds of hazardous waste sites and minor/major spill sites within the vicinity of the proposed dredging area. However, Weaver's Cove never performed sampling in the vicinity of all these potential source areas.

18. Since Weaver's Cove is applying these dredging spoils to an unlined commercial property that is less controlled than a landfill, Weaver's Cove should practice at least the same, if not an increased, level of care, assessment and characterization as is required for landfill application. Appropriate assessment of the dredging spoils is the only way to reduce the uncertainty that the dredge material is not properly characterized for beneficial use and is, when placed on land, neither (1) a hazardous or toxic material nor (2) characterized as a solid waste or a material that creates an unacceptable risk.

Weaver's Cove's Analysis Did Not Cover All the Relevant Contaminants

19. Weaver's Cove's dredging plan indicates that a total of 55 sediment samples were collected from 43 locations within the proposed turning basin of the Federal Channel in the vicinity of the Site. These samples were analyzed for one or more of the following: volatile organic compounds (VOCs), semi-volatile organic compounds ("SVOCs"), PCBs, pesticides, and metals. However, only an abbreviated list within each of these classes of compounds was analyzed. Weaver's Cove does not supply a rationale for selecting such a limited analysis list for

particular sample locations. Similarly, the analysis includes no data for independently assessing the validity of the contaminant selection process. Further, the method detection limits of the Weaver's Cove sediment were not adequate to quantify certain contaminants. Due to the character of sediment movement through a public waterway, a preferable approach would be to analyze all sediment samples for all the contaminants identified as potentially associated with historical activities in the area.

20. Weaver's Cove collected only 55 samples, and of these as few as 14 were analyzed for some contaminants. This leads to a very limited data set for characterization of the sediment quality and estimation of potential land application risks. The limited data set of just 14 samples available from the sediment is not sufficient to evaluate detection frequency associated with unlined uncontrolled land application of dredge sediment. Historical association of the contaminants with the Site, presence in other environmental media, and the potential for elevated concentrations in small areas (hotspots) must be evaluated prior to the elimination of a contaminant based on frequency of detection. *See* Section 5.9.3, *Risk Assessment Guidance for Superfund (RAGS) Part A, USEPA 1989.* Further, small datasets provide poor estimates of the mean concentration due to the large difference between the sample mean and 95 percent UCL. The Environmental Protection Agency assumes that any contaminant for which a positive detection has been confirmed should be used in the risk assessment unless otherwise indicated, as outlined in the *Risk Assessment Guidance for Superfund (RAGS) Volume I (Parts A & B): Human Health Evaluation Manual.* In the Weaver's Cove assessment, contaminants should not be eliminated from the risk characterization process if even one sample in the limited data set had a detectable concentration. Consistent with EPA risk assessment guidance on the use of relative toxicity for the evaluation of PAHs, all the carcinogenic PAHs should have been retained for further evaluation in a risk assessment if the screening methodology indicates that any one of

them should be retained[1]. This is a critical issue when PAH source and type are unknown, as is this case. PAHs are primarily derived from pyrogenic and petrogenic sources and enter the environment through combustion, atmospheric deposition urban runoff, storm water runoff and waste water processing natural sources and petroleum use. As indicated on Table 6 within the *Method 3 Risk Assessment for Upland Placement of Stabilized, Dredged Material* report, the following PAHs were not used in the risk assessment calculations though positive detections had been identified: acenaphthene, anthracene, benzo(a)anthracene, benzo(g,h,i)perylene, chrysene, dibenzo(a,h)anthacene, fluoranthene, fluorene, and indeno(1,2,3-c,d)pyrene. Furthermore, no pesticides were included within the risk assessment though these contaminants were present in MCZM samples collected from the East Channel sediments which are proposed to be placed at the Site. Considering these complexities, combined with the variability in sediment contaminant characteristics and distribution, and the proposed sediment placement on an unlined uncontrolled site with ongoing active remediation, the assessment should include these contaminants.

Weaver's Cove Inappropriately Downplays Contaminants that were Detected in the Samples

21. Weaver's Cove repeatedly contends that the concentrations of contaminants in the sediment were lower than the concentrations in soil samples previously collected from the Site. In *Resource Report 7 Soils,* Section 7.2.2.4, Weaver's Cove contends, "the sediment would not introduce significantly higher concentrations of [Oil and/or Hazardous Material] to the site when compared to [Oil and/or Hazardous Material] concentrations that presently exist in soil and groundwater at the site." However, Weaver's Cove bases this conclusion on use of the class of contaminants rather than individual contaminants. This approach can mask significant

[1] Provisional Guidance for Quantitative Risk Assessment of Polycyclic Aromatic Hydrocarbons, USEPA.1993 EPA/600/R-93/089 ORD]

differences in individual contaminants of concern and is therefore misleading. Weaver's Cove indicates that the average concentrations for total SVOCs in dredge spoils versus Shell soil data from the 0-15 foot interval are lower, however actual data is not provided on a per compound basis. *Method 3 Risk Assessment for Upland Placement of Stabilized, Dredged Material* – Figure 1. Figure 3 of this same report indicates that at a minimum greater than 21% of the sediment samples contain individual PAH concentrations greater than RCS-1 standards. The dredge spoils contain contaminants that are not contaminants of concern at the Site including some metals and PCB and pesticides, therefore increasing Site contamination. In addition, the calculated risks associated with the dredge materials were higher than the previously calculated risks for the existing Site soils using the same exposure parameters. Table 7 within the *Method 3 Risk Assessment for Upland Placement of Stabilized, Dredged Material* provides a comparison of total Hazard Index risks and Excess Lifetime Cancer Risk levels associated with the dredged spoils and Shell soil data. The risk levels associated with the proposed dredge material are higher for commercial worker and trespasser receptors than those currently existing at the Site.

22. Weaver's Cove states that "where comparable data are available (*i.e.*, VOCs, SVOCs, PCBs, and lead) the concentration of [Oil and/or Hazardous Material] in the dredged material, and the associated risks, are generally comparable to or less than the values for soil currently at the site." *Method 3 Risk Assessment for Upland Placement of Dredged Material* Section 6.0. This vague statement does not help assess the potential impact of placing dredged sediments on the existing soil. As stated in Section 4.4 of the *Method 3 Risk Assessment for Upland Placement of Stabilized, Dredged Material* report, the risks associated with the dredged material are higher than the risk associated with the soils. Weaver's Cove has not provided sufficient data and scientific evaluation to support its conclusion of non-degradation.

The Site Would be Degraded by the Dredging Spoils

23. Weaver's Cove acknowledges the presence of metals in sediments above the MADEP standards for Background Levels in Soil Associated with Fill Material. According to Table 9-Summary of PAHs and Metals in Dredged Material Consistent with Background of the Method 3 Risk Assessment for Upland Placement of Stabilized, Dredged Material by Environmental Resources Management, the 90th percentile upper confidence limits ("UCL") concentrations for beryllium, chromium, chromium (VI), mercury, selenium, and silver in sediments exceed the MADEP's standards for Background Levels in Soil Associated with Fill Material. A review of the new sediment maximum concentrations on Table 8-Construction Worker Method 1 Screening, indicates that arsenic, barium, nickel, zinc, and naphthalene are also present above the MADEP Background Levels in Soil Associated with Fill Material. Benzo(a)pyrene and benzo(b)fluoranthene maximum and 90th percentile UCL concentrations exceed the MADEP Reportable Concentrations Standards.

24. The addition of these contaminants to the Site constitutes a degradation of Site conditions, and increases the Site risk. Weaver's Cove is aware of this situation as indicated in Section 4.4 of the Method 3 Risk Assessment for Upland Placement of Stabilized, Dredged Material that states the risks associated with the dredge spoils are higher than those related to current Site conditions. Weaver's Cove's risk assessment determined that risk levels were greater for commercial workers and trespassers when exposed to dredge materials. This degradation is also demonstrated by the MADEP's Policy # COMM-97-001 (Reuse and Disposal of Contaminated Soil at Massachusetts Landfills) which defines contaminated soils as any soil that contains oil and/or hazardous materials regardless of whether the contaminant levels exceed the applicable Reportable Concentration ("RC") under Section 310 CMR 40.1600 of the MCP.

Adding these contaminants to the Site will alter the response action, as outlined above, and may increase the overall risk exposure at the Site.

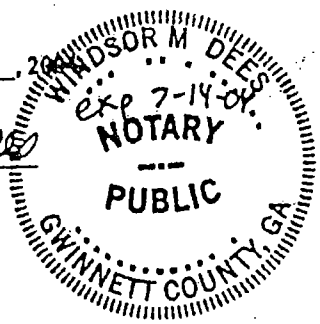
25. The placement of the contaminants on a commercial property might be construed as a solid waste application and become subject to potential cleanup requirements even if the contaminants are below a background level. The United States Environmental Protection Agency has required corrective action for contamination at levels below background at sites where the responsible parties placed the contaminated material, on the grounds that the placement eliminated the ability of the responsible party to argue that the contaminants are background. With respect to Weaver's Cove's proposal, the dredge material maximum values exceed background values (*Method 3 Risk Assessment for Upland Placement of Stabilized, Dredged Material – Tables 8 and 9*) and further illustrate the need for additional assessments.

Further affiant sayeth not.

Christopher J. Finley

Subscribed and sworn to before me, a Notary Public, this 16 day of March, 20

Windsor M. Dees
Notary



ATTACHMENT CF-1

Christopher J. Finley

Associate

EXPERIENCE SUMMARY

Mr. Finley is an Associate with NewFields and heads their Princeton New Jersey office. Mr. Finley has over 16 years of experience in the environmental field, specializing in strategic liability management, hazardous site property divestments and acquisitions, portfolio liability management, decision analysis and remediation. He provides strategies and expert reports/testimony to support and defend environmental litigation claims. He has assisted major oil companies in acquiring and divesting of multiple oil terminals and refineries. Mr. Finley's working knowledge of Federal and State regulations combined with his engineering expertise has allowed him to save clients millions of dollars through the re-evaluation and re-engineering site and portfolio management strategies that are more effective and efficient than the existing plans.

REPRESENTATIVE PROJECT EXPERIENCE

Hazardous Waste Management & Environmental Engineering

Portfolio Management – 300 Sites. Developed and implemented client specific portfolio liability management program focused on determining future regulatory liability and reduction of that liability based on actual work performed. Probability, time and cost distributions were used to prioritize site and determine expenditure efficiencies (dollar spent/dollar reduction in liability). Site with high range of uncertainty and/or low of negative expenditure efficiencies are targeted for strategic intervention and re-evaluation of work plans.

Strategic Litigation Management - Class Action. Compiled and evaluated a comprehensive GIS database for a residential area surrounding a impacted site in the North East to show spatial correlation between different data sets. This correlation was used to confirm the absence of a pathway between multiple potable wells and a source within a bedrock aquifer. Geostatistical models were used to show correlation in different data sets.

Litigation Support RCRA Facility and Bulk Storage Terminal Compiled and evaluated a comprehensive GIS database for a 180-acre Bulk Storage and Process facility in New Jersey to help determine spatial variations of source materials, manage remediation of Solid Waste Management Units (SWMUs) and aid in litigation issues. Several modeling results were incorporated into the GIS including groundwater, and geostatistical models.

Groundwater remediation and optimization. An ARC/INFO GIS database was used to perform comparative analyses of soil and groundwater data to show an absence of soil contamination leaching and adversely impacting groundwater quality at a Bulk Storage Terminal in Massachusetts. Revised remedial action plan from an extensive active soil and groundwater action to phyto-remediation saving the client in excess of $2,000,000. A detailed decision analyses was performed to allow the client to determine whether they should pursue this plan with the State Agency.

Bulk Terminal Acquisition - Liability Distribution. Responsible for the assessment of environmental liability related to ten separate facilities. Negotiated liability distribution between the two parties and the State Agency. Documented environmental conditions and developed site specific management plans to prevent potential future commingling of liability.

Bulk Terminal and Refinery facility management. Compiled a GIS database for an 80-acre facility in Massachusetts. The proposed remedial action included extensive soil and groundwater remediation. Through the use of a revised risk approach and assessment, active soil remediation was eliminated from the plan. An extensive groundwater extraction and treatment system was proposed to prevent potential migration of free product to the adjacent tidal river. All existing analytical and well gauging data were compiled into a GIS database. This data was used to determine where tidal wave velocities and attenuation would prevent further free product migration to the

river naturally (without active means). This saved the client from having to significantly upgrade and expand the existing remediation system to provide hydraulic control over a portion of the site. Geostatistics (specifically block kriging) was used to evaluate compliance with the cleanup goals identified through the risk characterization. This prevented the client from having to perform additional site characterization and sampling, saving the client $150,000.

Remediation planning using geostatistics. Principal Investigator for geostatistical analysis at Bulk Storage Terminal. Co-Kriging of lab data and field screening data was used to delineate soil contamination and optimize further assessment and risk characterization activities. This prevented the client from having to perform additional soil sampling and analyses, saving the client $300,000

EDUCATION AND TRAINING

B.S.C.E, Civil Engineering, Rochester Institute of Technology, 1990 - specializing in Hydrogeology and Fluid Mechanics

40 Hour HAZWOPER and Supervisory Training

REGISTRATIONS AND PROFESSIONAL AFFILIATIONS

American Society of Civil Engineering

Certified by the New Jersey Department of Environmental Protection for UST Closure and Subsurface Work

Licensed by the State of New Jersey for Drilling
OSAH 40 hr and Supervisor
Confined Space Entry

Attachment 4

August 28, 2003

CERTIFICATE OF THE SECRETARY OF ENVIRONMENTAL AFFAIRS
ON THE
ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME	: Weaver's Cove Energy LNG Import Terminal
PROJECT MUNICIPALITIES	: Fall River, Somerset, Swansea, Freetown
PROJECT WATERSHED	: Taunton River
EOEA NUMBER	: 13061
PROJECT PROPONENT	: Weaver's Cove Energy, LLC
DATE NOTICED IN MONITOR	: July 8, 2003

Pursuant to the Massachusetts Environmental Policy Act (G. L. c. 30, ss. 61-62H) and Section 11.03 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project **requires** the preparation of an Environmental Impact Report (EIR). In a separate Certificate issued today, I have established a Special Review Procedure to guide the MEPA review of the project.

As described in the Environmental Notification Form (ENF), the proposed project involves development of a 200,000 cubic meter Liquefied Natural Gas (LNG) storage tank, a new dock, LNG transfer piping, vaporization equipment, and associated infrastructure on an existing 68.5-acre maritime industrial site within a Designated port Area (DPA). The project also involves development of one or more pipeline connections from the site to the existing natural gas distribution network. In addition, the project involves dredging approximately 2,100,000 cubic yards of sediment from the Taunton River in Massachusetts and Rhode Island[1].

1 MEPA applies only within the physical boundaries of Massachusetts. However, the jurisdictional limitations of MEPA do not affect the ability of the Massachusetts Coastal Zone Management Office

The project is undergoing MEPA review and requires the preparation of an EIR pursuant to Sections 11.03 (1)(a)1. and (3)(a)1.b. of the MEPA regulations, because the project involves alteration of more than 50 acres of land and alteration of more than 10 acres of non-vegetated wetlands. The project also meets MEPA filing thresholds related to wetlands alteration (Section 11.03 (3)(b)1.c.), dredging (Section 11.03 (3)(b)3.), and dredged material disposal (Section 11.03 (3)(b)4.).

The project will require numerous state and federal permits. At the federal level, the project will require approvals by the Federal Energy Regulatory Commission (FERC), United States Army Corps of Engineers (USACE), Environmental Protection Agency (EPA), United States Coast Guard (USCG), and Department of Transportation (DOT). The project will also require consultation by several other agencies with resource management responsibilities. The project will undergo review pursuant to the National Environmental Policy Act (NEPA), with FERC as the lead federal agency. The Special Review Procedure lays out the process by which the NEPA and MEPA reviews will be coordinated.

At the state level, the project will require a Chapter 91 License, a Water Quality Certificate, a Water Supply Cross Connection Permit, a Non-Major Comprehensive Plan Approval, an Asbestos Abatement Permit, approval pursuant to the Massachusetts Contingency Plan, and a Superseding Order of Conditions (in the event of an appeal of the local Order) from the Department of Environmental Protection (DEP). The project will also require Consistency Review by the Massachusetts Coastal Zone Management Office (MCZM), approval from the State Fire Marshall, and review and consultation by several other agencies with resource management responsibilities, including the Energy facilities Siting Board, Massachusetts Historical Commission, and Massachusetts Board of Underwater Archaeological Resources. The project may also require approval from the Massachusetts Highway Department (MHD).

Because the proponent is not seeking financial assistance from the Commonwealth for the project, MEPA jurisdiction extends to those aspects of the project that have potential to cause significant Damage to the Environment as defined in the MEPA statute and that are within the subject matter of required or potentially required state permits and approvals. In this case,

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to conduct its required Consistency Review for those portions of the project in Rhode Island.

MEPA jurisdiction is equivalent to full scope jurisdiction, given the large number of state permits required and the comprehensive subject matter of the required state permits.

I have received many comments raising concerns with the proposed development, including several letters expressing strong opposition to the project as proposed. I wish to remind commenters that under MEPA, I do not have the authority to approve or deny the project. MEPA is not a zoning appeal process, nor is it a permitting process. Rather, it is a process designed to ensure public participation in the state environmental permitting process, to ensure that state permitting agencies have adequate information on which to base their permit decisions and their Section 61 Findings, and to ensure that potential environmental impacts are described fully and avoided, minimized, and mitigated to the maximum feasible extent.

SCOPE

General

As noted previously, I have established a Special Review Procedure for the MEPA review of this project to provide better coordination among state and federal agencies and to maximize opportunities for public participation in the review of this complex project. The Special Review Procedure lays out the general requirements for outline and content of the EIR. Because of the coordinated federal and state review, I have allowed the proponent to vary the format from the usual EIR format contained in Section 11.07 of the MEPA regulations.

Alternatives

The proponent should evaluate the no-build alternative to establish baseline conditions. The EIR should also fully evaluate the proponent's preferred alternative. In addition, the EIR should evaluate the Brayton Point alternative described in the ENF. (I anticipate that the federal EIS may include analysis of additional alternatives, some of which may be located outside of Massachusetts.)

The EIR should evaluate any alternative sites deemed necessary by MCZM to establish coastal dependency and to otherwise comply with Coastal Energy Policy #1. The EIR should also include any alternatives necessary for the state permitting processes, including the Chapter 91 License and the Water Quality Certification.

The EIR should evaluate alternative site layouts to arrive at a layout that minimizes overall impacts. The EIR should evaluate a site layout without disposal of dredged sediment on the site.

The EIR should also evaluate alternatives of individual project elements, including alternative pipeline routes, alternative dredging and disposal options, and alternative designs for the LNG facility itself.

Permitting

The EIR should include a general description of each project element, and the EIR should briefly discuss each state permit or Agency Action required for the project. The EIR should demonstrate that the project can meet any applicable regulatory or statutory performance standards. In accordance with Executive Order 385 (Planning for Growth) and section 11.01 (3)(a) of the MEPA regulations, the EIR should also discuss the consistency of the project with the local and regional growth management and open space plans.

Regional Planning Issues

The availability of a reliable natural gas supply has emerged as a key concern in New England in recent years. The proposed project is designed to enhance the regional supply, and may allow for conversion of several large power plants and other facilities to natural gas. The EIR should discuss the project within the context of regional energy supply and demand, and regional air quality goals.

Cumulative Impacts

A second LNG facility is under consideration at Brayton Point, although the proponent of this project has not made any formal filings as of this date. I understand that a third facility in the general area may also be at least in the discussion stage. To the extent that information on the other facilities is available, the EIR should discuss whether cumulative impacts from multiple LNG facilities might occur. The EIR should also discuss to what extent the Brayton Point facility or other facilities in the region might be considered an alternative to the proposed facility.

Wetlands/Drainage

The EIR should include a reasonably scaled map that delineates wetland boundaries and buffer zones on the site and in affected portions of the Taunton River, and should include the appropriate overlays of each site layout described in the alternatives analysis. The plans should also note any applicable local wetlands and/or buffer zone requirements. The EIR should explain the significance of each wetland area on the site to the interests enumerated in the Wetlands Protection Act.

The project as currently designed results in the alteration of approximately 1,700 square feet of salt marsh. The EIR should evaluate the functions of this salt marsh, and should explore methods of reducing impacts to this resource.

Waterways/Chapter 91

The EIR should explain in detail the proposed project's Chapter 91 licensing requirements, and how the proponent intends to meet all legal standards related to those requirements. The EIR should discuss the design and operation of the proposed pier facility and bulkhead, and demonstrate that the design is compatible with existing DPA uses. The EIR should include information on the aerial extent of the new bulkhead, the amount of fill proposed for placement in the water, and construction methods for the new pier and any pipelines proposed under the river. The EIR should also include an analysis of construction impacts on Chapter 91 lands, and should include plans to avoid or minimize navigation and other impacts during the dredging/ construction periods.

Water Quality/Dredging/Sediment Management

The EIR should include an analysis of how the dredging operation complies with state water quality standards. The EIR should include analysis of impacts to wetlands resources and fisheries from dredging operations, and should include a detailed analysis of the physical and chemical characteristics of the dredged material. The EIR should discuss any dredging/ construction windows necessary to avoid or minimize impacts to fisheries.

The proponent's preferred alternative includes dredged material disposal on the upland portions of the project site. The EIR should address the feasibility of this option in light of the comments received from DEP and others. The EIR should

discuss the consistency of this disposal plan with the requirements of the Massachusetts Contingency Plan.

Coastal Zone Impacts

As noted earlier, the EIR should include enough information on the project and its potential alternatives to establish coastal dependency. In addition, the EIR should evaluate the consistency of the project with the enforceable policies of the Massachusetts Coastal Zone Management Plan. In particular, the following policies appear particularly relevant to the proposed project: Energy Policy #1 (general); Ports Policy #3, Ports Management Principle #1, Habitat Policy #1, and Coastal hazard Policy #2 (LNG Terminal); Water Quality Policies #1 and #2, Habitat Policy #1, Protected Areas Policy #3, Coastal Hazard Policies #2 and #3, and Ports Policies #1 and #2 (Dredging); and Habitat Policy #1 (Pipelines).

Safety

The EIR should address the numerous concerns raised with safety, particularly concerns with the storage and transport of LNG. The EIR should discuss the safety features that the facility will employ (including containment berms and tank design) to enhance safety. The EIR should document how the facility would meet any applicable state regulations regarding safety of the facility. The EIR should also address the safety concerns with tankers in the Taunton River. The EIR should evaluate a "worst case" safety event involving the loss of the physical integrity of the LNG tank and delivery tankers. The EIR should also discuss the chemical characteristics of LNG, and any safety precautions commonly employed in LNG storage and transport.

Environmental Justice

The proposed facility does not trigger requirements for enhanced notification and outreach pursuant to the Executive Office of Environmental Affairs Environmental Justice Policy. Nevertheless, I strongly encourage the proponent to engage in significant public outreach efforts in nearby communities. The EIR should include a summary of any community meetings sponsored by the proponent.

Land Alteration

The EIR should quantify the amount a type of land altered

for each alternative studied. The EIR should also identify which alterations would be permanent, and which would be temporary.

Transportation

The EIR should evaluate any transportation impacts from the project. The EIR should discuss whether and how often bridge closures would prove necessary to safely accommodate fuel tanker deliveries.

Air Quality

The project will require use of boilers to provide a heat source for LNG vaporization. The EIR should include a Best Available Control Technology (BACT) analysis for the proposed boilers. The proponent is proposing use of low-NO_x burners. The EIR should investigate whether additional pollution control may constitute BACT for the proposed application.

Noise

The EIR should include an analysis of noise (both construction period and operational) from nearby representative residential areas in Fall River and Somerset. The analysis should include quantification of L_{max}, L_{10}, L_{50}, L_{90}, and DNL levels. The EIR should demonstrate that the project could comply with the requirements of the DEP Noise Policy (DAQC Policy 90-001).

Article 97

At least one proposed pipeline route passes through the proposed Southeastern Massachusetts Bioreserve, a major parcel of contiguous open space. The EIR should identify whether any Article 97 lands would be impacted by the project, should identify the nature of the lands, and whether Commonwealth funds were expended for the lands. The EIR should identify whether any impacts to Article 97 land would represent a disposition of Article 97 land. If the project results in an Article 97 disposition, the EIR should demonstrate that the proponent has satisfied the requirements of the EOEA Article 97 Disposition Policy.

Archaeology

The EIR should include the results of an archaeological reconnaissance survey for the proposed pipeline routes and any

access roads, storage yards, or other areas likely to be affected by the project. The EIR should include the results of an underwater archaeological reconnaissance survey for those areas of the dredging footprint that have not previously been disturbed and that have high archaeological sensitivity.

Site Remediation

The EIR should include an update of ongoing site remediation activities, as well as a thorough analysis of how existing site contamination may affect the feasibility of the proposed on-site dredged material disposal.

Construction Period

The EIR should include a thorough analysis of construction impacts from the project, including impacts on transportation (including water transportation), wetlands, waterways, noise, and air quality. The proponent should consider participation in the DEP Clean Air Construction Initiative.

Comments

The EIR should respond to the substantive concerns raised in the comment letters.

Mitigation

The EIR should include a summary of all mitigation measures to which the proponent is committed. The EIR should include proposed Section 61 Findings for use by the state permitting agencies.

August 28, 2003
Date

Ellen Roy Herzfelder

Comments received on the ENF:

07/23/03 Shell Oil Company
07/29/03 Alfred Lima
07/29/03 Green Futures
07/29/03 Board of Selectmen, Town of Somerset, MA
07/29/03 Transcribed Oral Testimony, MEPA/FERC Coordinated Scoping Meeting, Swansea, MA
08/01/03 Save the Bay
08/04/03 Mr. And Mrs. Michael Dubuque
08/04/03 Kenneth Dean Jr.
08/04/03 Michael Soares
08/04/03 Stacy Souza
08/07/03 Massachusetts Historical Commission
08/07/03 Ronald Thomas
08/07/03 MA Board of Underwater Archaeological Resources
08/08/03 Mr. And Mrs. Edward Cote
08/11/03 SE Regional Planning and Economic Development District
08/12/03 MA Energy Facilities Siting Board
08/13/03 Mary Ann Wordell
08/13/03 Mayor Edward Lambert, City of Fall River, MA
08/13/03 MA Coastal Zone Management Office
08/14/03 MA Division of Marine Fisheries
08/14/03 MA Department of Environmental Protection - Boston
08/14/03 Roger Hood
08/14/03 Jennifer Dias-Rezendes
08/15/03 US Environmental Protection Agency Region 1
08/18/03 MA Representative David Sullivan
08/19/03 Mayor Edward Lambert, City of Fall River, MA
08/25/03 US Department of Commerce NMFS

ERH/ASP/asp

cc: Chris Zerby, Federal Energy Regulatory Commission
Brian Valiton, United States Army Corps of Engineers
Tim Timmermann, United States Environmental Protection Agency

Attachment 5

ESS Group, Inc.

Engineers
Scientists
Consultants

888 Worcester Street
Suite 240
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Massachusetts
02482
p 781.431.0500
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September 10, 2004

Magalie R. Salas, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E., Room 1A
Washington, DC 20426

RE: Weaver's Cove, LLC and Fall River, LLC;
Docket Numbers CP04-36-000 and CP04-41-000

City of Fall River Comments on Draft Environmental Impact Statement /Draft Environmental Impact Report Concerning Issues Raised by NOAA Fisheries and the Massachusetts Division of Marine Fisheries

Dear Secretary Salas:

The City of Fall River, MA is, by this correspondence, submitting a portion of its written comments in response to the Draft Environmental Impact Statement (DEIS)/Draft Environmental Impact Report (DEIR) issued by the Federal Energy Regulatory Commission (Commission) on July 30, 2004. These comments address the issues raised concerning the natural resource and public trust resource impacts of the proposed project on the aquatic, sub-tidal, and coastal environments of Fall River and Southeast New England. The balance of the City's comments on other aspects of the proposed project will be submitted to the Commission, as well as to the other participating agencies, on or before September 20, 2004.

NOAA Fisheries (NOAA) participated in the scoping of the proposed project and, according to the DEIS/DEIR, participated in four meetings with the Commission and other cooperating agencies. In addition, the Commission's docket reflects that NOAA and the Massachusetts Division of Marine Fisheries (MDMF) submitted written comments to the Commission and to the Massachusetts Department of Environmental Protection (MADEP) on July 28, 2003, September 26, 2003, May 21, 2004, and June 8, 2004. In addition, the docket reflects that members of the Commission's staff submitted comments on December 8, 2003 addressing the dredging program and salt marsh mitigation, which are issues raised by NOAA and the MDMF. These documents are attached hereto and expressly incorporated by reference.

Introduction

The proposed project, as described in the DEIS/DEIR and in the Clean Water Act Section 10 and Section 404 Water Quality permit application submitted to the U.S. Army Corps of Engineers (USACE) on March 18, 2004, will have enormous adverse impacts; temporary and permanent; upon the 191 acres of sub-tidal habitat within the dredging footprint, on water quality within the Taunton River and its watershed, on coastal wetland resources, and on the diverse and irreplaceable forms of life that depend upon these resources.

The project purpose, as expressed and as interpreted by WCE, affords no alternative to the massive dredging program proposed. While this may be WCE's position, it is insufficient under any reasonable interpretation of NEPA requirements, MEPA requirements (as well as the MEPA Certificate issued by the Secretary of the Massachusetts Executive Office of Environmental Affairs on August 28, 2003), and Section 404(b)(1) requirements of the Clean Water Act, to state that this is the ONLY available alternative to providing the New England Region with an additional source of LNG. While the City's comments on the inadequacy of the public interest review required by the USACE, as well as the inadequacy of the demonstration of LEDPA under the Section 404(b)(1) Guidelines, will be addressed specifically in the comments submitted to the USACE within the comment period, it is useful to make several points here.

When a project purpose is defined, it cannot be so limited as to effectively eliminate the consideration of other alternatives, which is what WCE has done here. When an alternatives analysis, which is required by NEPA, MEPA, and the USACE permitting process is performed, an alternative may NOT be dropped from consideration because there is no current ownership or control of an alternative site. This happened with several other sites described in the DEIS/DEIR. In fact, the USACE guidance in this region provides that lack of control or ownership is NOT a basis to drop a site from consideration as an alternative.

This preliminary comment is necessary to understanding the point being made here: the proposed dredging program may not be necessary, if WCE properly performs the alternatives analyses required by NEPA, MEPA, and the USACE. As an overarching issue, had the alternatives analysis been adequate, the issues being raised about the proposed dredging program may not have required consideration, as the necessity to dredge on this scale and for this duration only exists at the proposed site. The City believes that, had a complete and sufficient alternatives analysis been performed at the appropriate time and in the appropriate manner, these comments may not have been necessary.

The City recommends that the Commission require WCE to conduct a full and complete alternatives analysis, including proposed locations and site configurations that are not currently under the control of WCE and including a full review of offshore alternatives, and sites and locations north of Massachusetts, within the New England region.

The City further recommends that a supplementary DEIS/DEIR be prepared which provides the results of that alternatives analysis, for public review and comment.

Proposed Dredging Program

NOAA and the MDMF have consistently raised concerns about the scope and extent of the dredging program, the lack of planning for dredged materials management, the refusal to consider project sequencing and time-of-year restrictions, the refusal to specify the methodology to be employed in the dredging program, the refusal to distinguish the standards and requirements for improvement dredging, and the refusal to consider future dredging requirements.

Scope of Dredging. The volume of material has consistently been under-estimated and the distinction between maintenance dredging and improvement dredging, other than inaccurate quantifications of volume, has been ignored. The volumes were originally estimated in the Project EENF, Notice of Intent, and state permit applications, to be between 2.1 – 2.5 million cubic yards of material. NOAA pointed out in its comments of September 26, 2003 and May 21, 2004, that the meaning of "overdredge" was misconstrued by WCE and the volumes were seriously underestimated. The 3.1 million cubic yards estimated by NOAA has been adopted in the DEIS (2-27) as the amount of material WCE has to address, in a separate submission not contained in the DEIS/DEIR, for management and disposal.

This raises a series of issues. The sediment sampling, the inadequacies of which will be addressed in detail in later comments, was predicated on the lesser volumes originally estimated by WCE. To the extent that any of the sampling was representative, the increase in volume necessitates additional testing and characterization. Further, the suggestion that compositing (DEIS at 4-21) will generally ensure that no "hot spots" of contamination will occur and that the material will be rendered essentially homogenous, does not stand scrutiny in light of these acknowledged, additional volumes.

The additional volumes will, tautologically, increase the duration of the dredging program well beyond the estimated three years. While the original

three-year, continuous, twenty-hour hour/day, seven day/week program already suffers from profound deficiencies, as set forth in the City's comments at the public hearing on September 8, 2004, the increased volume makes the current proposal completely unreasonable and the inevitable impacts upon natural resources indefensible.

The additional volumes were not accounted for in the Suspended Sediment Fate and Transport (SSFATE) model, which also suffers from significant deficiencies. There can be no assurance placed upon the impact predictions of the SSFATE model, in light of the increase in volume of material.

The current division between maintenance and improvement dredging volumes, which the DEIS/DEIR estimates at 34% maintenance and 66% improvement (2-26) draws no distinction between the requirements placed upon improvement dredging, nor are the figures accurate. As pointed out in the City's comments to the Massachusetts Department of Environmental Protection (MADEP) (page 3; copy attached hereto and expressly incorporated herein) WCE predicates its figures on assertions of prior dredging activities and licenses that WCE itself states cannot be found or documented.

The City recommends that a supplementary DEIS/DEIR be prepared which includes the proper material volume, runs the model, and provides the results for public review and comment.

The City recommends that a supplementary DEIS/DEIR be prepared which includes the proper figures for maintenance and improvement dredging, requires the appropriate standards for improvement dredging, and provides the results for public review and comment.

Dredged Materials Management. WCE has consistently provided the Commission, the USACE, and MADEP with a list of possible dredged materials management schemes, but has reserved any determination of the mechanisms to actually be employed, to the dredging contractor. WCE has insisted that such flexibility is necessary and that such specificity cannot be provided. WCE also states that the information provided is, "... solely for illustrative purposes of the typical dredging and disposal alternatives, sequences and inter-relationships." See page 53 and Table 5, page 58, Section 10 and 404 Permit Application (copies attached hereto). See also WCE response to Commission Information Request dated February 5, 2004 (copy attached hereto). Such flexibility may be an advantage to the contractor, but it renders any accurate impact assessment impossible. The DEIS/DEIR cannot, with any credibility, conclude that the effects of the dredging program will be either insignificant or unavoidable without this information.

The City recommends that a supplementary DEIS/DEIR be prepared which sets forth with specificity the impacts and benefits of each proposed management scheme, and identifies the preferred scheme, for public review and comment.

Suspended Sediment Fate and Transport (SSFATE) Model

NOAA and the MDMF have consistently commented that the SSFATE model, which predicts the impacts upon water quality, habitat, and fisheries, suffers from significant problems because of the modeling assumptions employed. Specific inputs included the depth of spawning range for winter flounder, depth of burial of winter flounder eggs, and duration of exposures to sediment impacts upon winter flounder eggs.

The DEIS/DEIR partially responds to these modeling concerns (4-76). However, neither the SSFATE modeling results, nor the information provided in the Section 10 and Section 404 permit application, reflect that these inputs have, in fact, been changed and no new results or predictions have been included in the DEIS/DEIR.

The City recommends that a supplementary DEIS/DEIR be prepared which includes those inputs and the results of those changes, for public review and comment.

The DEIS/DEIR fails to adopt NOAA's suggested duration of exposures upon winter flounder eggs and associated mortality (4-77), which NOAA states to be 21 – 40 days. The DEIS/DEIR maintains that the lowest bound of 21 days is sufficient and recommends that NOAA consult with WCE about any additional concerns.

As described later in these comments, the impacts upon this fishery, which has been in decline, are significant and of potentially permanent duration. To ignore the comments of the agency whose mission is to protect this public trust resource is irresponsible and unacceptable. NOAA and the MDMF must be allowed to protect this resource and to substitute the judgment of the project proponent over that of these natural resource trustees is indefensible.

The City recommends that a supplementary DEIS/DEIR be prepared which incorporates NOAA's input assumptions, runs the model, and provides the results for public review and comment.

EFH Assessment

As set forth in the comments of NOAA and the MDMF, the impacts upon the habitats, life stages, and potential mortality of finfish and shellfish population as the result of the dredging program, are enormous. NOAA initially identified fourteen finfish species (and later reduced the total EFH count to eleven) and three shellfish species that could suffer severe, and potentially permanent impacts. The MDMF identified fourteen finfish species subject to protection under both federal and state fisheries management and the Massachusetts Wetlands Protection Act regulations, including alewife, American shad, hickory shad, gizzard shad, rainbow smelt, white perch, striped bass, American eel, winter flounder, Atlantic menhaden, tautog, bluefish, and a Massachusetts endangered species, Atlantic sturgeon. NOAA and the MDMF also identified three shellfish resources; Northern quahog, American oyster, and soft-shelled clams, as subject to protection.

The EFH Assessment, which is physically part of the USACE permit application incorporated into the DEIS/DEIR, concludes that limited impacts will result from the dredging activities upon the habitat and lifestages of these species. However, the EFH Assessment is materially deficient in several respects, either by employing inadequate or no data, or by ignoring the comments and recommendations of NOAA and the MDMF.

NOAA recommended that site-specific biological studies be performed for these identified species. As set forth in the DEIS/DEIR (4-81 through 4-88) NO site-specific studies or inspections were performed.

NOAA recommended that specific information and site-specific inspections be conducted within the dredging footprint, to assess impacts on benthic communities. As set forth in the DEIS/DEIR (4-73) no specific information was reviewed and NO site-specific inspections were performed.

Both NOAA and the MDMF recommended specific project sequencing and, in the case of the MDMF, very specific time-of-year restrictions on the dredging program. Both agencies concluded that such sequencing and restrictions were necessary at critical life stages for winter flounder and the MDMF concluded that avoidance and mitigation of potentially permanent impacts upon finfish and shellfish species necessitated the suggested time-of-year restrictions.

The DEIS/DEIR rejected these comments and recommendations completely. The DEIS/DEIR recommended operational changes to equipment, a one-time shellfish seeding and relay program, and offered the comment that

time of year restrictions could delay construction and impose financial burdens on WCE (4-78).

With regard to benthic communities, the DEIS/DEIR concludes that species eliminated by the dredging program would re-populate the area. The DEIS/DEIR did not identify WHICH species would re-populate and ignored the concern that several benthic communities would be completely eliminated. The distinction between existing shellfish communities and re-population by other, more opportunistic species, was ignored in the DEIS/DEIR.

The DEIS/DEIR dismissed the MDMF concerns about non-excavation-related impacts of dredging, including the placement, management and removal of spuds, anchors, and chain sweeps, as insignificant. It similarly dismissed NOAA and MDMF comments concerning the need for a cumulative impact analysis and a 404(b)(1) analysis, concluding that any impacts would be limited and temporary (4-88).

Having either ignored or dismissed many of the significant concerns and recommendations proffered by these agencies, the DEIS/DEIR concludes that the EFH Assessment, as it now stands, is sufficient to allow NOAA to determine that consultation and effects conclusions required under the Magnuson-Stevens Fishery Conservation and Management Act have been satisfied (4-88).

Such a conclusion, given the lack of data, lack of consideration of vital resources and habitats, and refusal to acknowledge many of the concerns of these agencies, does not satisfy the requirements of NEPA, MEPA, Section 10 and Section 404 of the Clean Water Act, or the Magnuson-Stevens Fishery Conservation and Management Act.

The failure to require time-of-year restrictions is also a matter of Massachusetts state law. The regulations implementing Chapter 91, the Massachusetts Waterways Act, as set forth in the City's comments to the MADEP (copy attached hereto; page 9), prohibit dredging activity between March 15th and June 15th, except upon the determination of the MDMF; 310 CMR 9.40(2)(a). Not only has the MDMF NOT provided such a determination, it has concluded that this program will permanently alter and potentially eliminate species subject to its oversight in Massachusetts. The DEIS/DEIR cannot ignore such fundamental state law requirements.

Winter flounder, as pointed out by the City at the public hearing conducted on September 8, 2004, are the subject of federal and state fisheries management plans and have been since 1986. NOAA and the MDMF are charged with the protection and re-vitalization of this species. Both agencies have commented that the proposed dredging program could have permanent

and potentially non-recoverable impacts upon winter flounder. It is indefensible for the DEIS/DEIR to recommend that, while fishermen are prohibited by federal and state law to take this species, the public interest is served by allowing a dredging program that has the potential to eliminate it.

Finally, the DEIS/DEIR does not offer a mitigation program, in the event that impacts are unavoidable. While it is the belief of the City and the natural resources agencies that these impacts certainly ARE avoidable, the DEIS/DEIR cannot be considered complete without such a plan. The DEIS/DEIR, rather than offering such a plan for public review and comment, directs WCE to file such a plan with the Commission and engage in further consultations with NOAA. Such a proposal eliminates any opportunity for public review and comment of any mitigation plan. That is unreasonable and unacceptable under NEPA, MEPA, and the USACE requirements for public participation in this process.

The City recommends that a supplementary DEIS/DEIR be prepared which incorporates and implements the comments and recommendations of NOAA and the MDMF and includes a proposed mitigation plan for any unavoidable impacts, for public review and comment.

The City further recommends that NOAA reject the EFH Assessment as it now stands and require an EFH that complies with both the Magnuson-Stevens Fishery Conservation and Management Act and with the implementing regulations for EFH Assessments.

Biological Assessment

The DEIS/DEIR requests that it be substituted for the Biological Assessment required under Section 7 of the Endangered Species Act (4-89). The City is hard-pressed to understand this request, as no Biological Assessment was included in the DEIS/DEIR.

NOAA identified leatherback and Kemp's ridley sea turtles, which are federally endangered species, as within the vicinity of the project. NOAA Fisheries also identified green sea turtles and loggerhead sea turtles, which are federally threatened species, as within the vicinity of the project. The MDMF and Massachusetts Natural Heritage identified Atlantic sturgeon, a state-listed endangered species, as potentially within the vicinity of the project, as well as oyster catchers, roseate terns, and least terns, also state-listed endangered species, as potentially within the vicinity of the project.

Under Section 7 of the Endangered Species Act, a Biological Assessment of these identified species must be performed as part of the NEPA and MEPA

reviews. None was performed, but the DEIS/DEIR asks that it stand in the place of this requirement.

The City recommends that a supplementary DEIS/DEIR be prepared that incorporates the required Biological Assessment, and that it be submitted to the natural resource oversight agencies and to the public for review and comment. The City also recommends that NOAA and the U.S. Department of Fish and Wildlife reject the DEIS/DEIR as being a sufficient substitute for these required assessments.

Wetland Resources

NOAA and the MDMF, as well as Massachusetts Office of Coastal Zone Management and MADEP, have recommended that the filling of critical coastal wetland resources; land containing shellfish, sub-tidal habitats, and resources supporting the development of finfish and shellfish; notably salt marshes, be avoided. NOAA also commented that, if avoidance is impossible, a mitigation and restoration plan be proposed and provided as part of the DEIS/DEIR.

The DEIS/DEIR does not respond to these comments. The Massachusetts state water quality certifications and wetland applications filed by WCE propose filling of all of these resources areas, which provide essential habitat and juvenile fisheries support. The Section 10 and Section 404 permit application includes a functional analyses of salt marsh resources (Attachment G), which are designated as a special aquatic site under Section 404 of the Clean Water Act. The analyses states that no on-site inspection of the salt marshes was performed and concludes that the salt marshes proposed to be filled provide the following functions and values: finfish and shellfish habitat and juvenile population habitat, groundwater recharge/discharge, sediment and toxicant reduction, production export, and wildlife habitat.

Despite these determinations, the analysis concludes, and the DEIS/DEIR agrees, that because these resources are small, they are negligible; eliminating them would not be a significant impact.

Salt marshes generally are subject to special protection under a variety of federal and state programs administered by NOAA, the MDMF, Coastal Zone Management, the United States Environmental Protection Agency, the USACE, and the MADEP, because of their unique and irreplaceable value as a resource. With respect to the City of Fall River, who, as the sad result of years of environmental degradation, has very few of these resources, to suggest that their small size renders them appropriate to eliminate, is an anathema. In fact, they should be afforded higher levels of protection, in order to restore and

enlarge these limited and valuable resources in an area of New England that has seen them decline for many years.

The DEIS/DEIR requires WCE to submit a mitigation plan addressing these resources, which is not currently part of the DEIS/DEIR and would not be subject to public review and comment. The DEIS/DEIR does NOT require WCE to evaluate alternatives, as required by the Secretary of the Massachusetts Executive Office of Environmental Affairs, which would avoid destroying these resources completely.

The City recommends that a supplementary DEIS/DEIR be prepared that includes alternatives to avoid these impacts entirely, as well as a mitigation plan if such avoidance is impossible, for public review and comment.

Conclusion

The DEIS/DEIR is materially deficient in significant respects, such that it should not stand as a DEIS/DEIR that complies with the requirements of NEPA or MEPA. It is also inadequate in providing the information necessary to evaluate the scope and extent of impacts, evaluate alternatives, or stand as an EFH or a Biological Assessment under the Magnuson-Stevens Fishery Conservation Act or Section 7 of the Endangered Species Act.

Accordingly, the City requests that the Commission, the Massachusetts Executive Office of Environmental Affairs, and the U.S. Army Corps of Engineers, act upon the recommendations set forth throughout these comments.

Fundamentally, the DEIS/DEIR requires substantive supplementation, as well as an opportunity for the public to review and comment upon this vital, additional information.

Unless or until that happens, no consideration should be given to progressing to a final EIS/EIR, or a final permit decision.

Respectfully submitted on behalf of the City of Fall River,

Carol R. Wasserman

cc: USACE – Brian Valiton
NOAA Fishieries – Peter D. Colosi
EOEA – James Hunt
MDMF – Paul Diodati
MADEP – John Felix
MCZM – Deerin Babb-Brott

WEAVER'S COVE LNG PROJECT

SUMMARY OF AGENCY SCOPING MEETINGS
JULY 28-30, 2003

Agency	Comment/Issue/Question
State Agencies	
July 28, 2003 Rhode Island Department of Environmental Management (RI DEM); Coastal Resources Management Council (CRMC)	• a joint permit application would be required for dredging activities; • permit process typically takes 45-60 days with a 30-day public comment period; • permit would not be issued until after the EIS is completed; • potential impacts on anadromous fish runs up the Taunton River should be addressed; • WCE would need to avoid dredging during the fish runs; • timing windows for dredging are determined on a project-specific basis; • fish studies conducted for the Brayton Point Power Plant would provide existing data on fish resources in the project area; • potential impacts of a deeper navigational channel on saltwater intrusion up the Taunton River should be addressed; • potential impacts of a deeper navigational channel on the warmwater discharges from the power plant and the associated downstream effects on aquatic resources in Mount Hope Bay should be addressed; • the plan for disposing of the dredged material should be discussed - RI DEM and CRMC prefer upland disposal; • the use of the ocean disposal site 69B would be controversial (fisherman and Save the Bay would be opposed) and would slow down the permitting process; • disposal site 69B is located in Federal waters so no permit would be required from RI DEM but a permit would be required for dredging in state waters; • if site 69B would be selected as the preferred disposal site, the U.S. Army Corps of Engineers would need to approve the use of the disposal site 69B the Council would approve the dredging project; • RI DEM and CRCM recommended conducting an interagency meeting to discuss dredging issues and timing windows; • RI DEM and CRCM do not recommend mitigative measures such as silt curtains because these are only effective in shallow waters (6 to 12 feet); • RI DEM and CRCM recommend using closed dredge buckets and no overflow while loading barges to reduce turbidity; • some dredging of coarse sediments outside of timing windows may be allowed; • staff of CRMC conducts a technical review of dredging projects and provides recommendations to the Council for approval; • monitoring (*e.g.*, metals, turbidity) would most likely be required by RI DEM and CRCM during dredging activities; • the monitoring of dredging at Providence River Project has indicated that the SSFATE model provides conservative estimates of suspended sediment plumes and metal levels; • the EIR/EIS should address and compare air emissions as the result of converting coal-fired power plants to gas-fired plants; • RI DEM asked if the proposed project could provide natural gas to the Brayton Point Power Plant in the event that it is converted to a gas-fired facility; • beneficial use of dredged material for island creation (*e.g.* Spar Island) is considered advantageous for developing bird habitat but is considered detrimental to fish resources

Agency	Comment/Issue/Question
July 28, 2003 Massachusetts Energy Facility Siting Board (EFSB)	• EFSB is not a permitting agency; • EFSB holds public meetings and provides comments on energy facility projects; • the filing of an application with the FERC initiates the EFSB review process; • EFSB provides comments to the FERC and intervenes in the FERC process; • because the state rules do not provide for the NEPA pre-filing process, EFSB cannot hold a public meeting on the project until after the FERC filing; • alternative pipeline routes should be addressed; • potential noise impacts associated with dredging and construction activities (work hours and duration) should be addressed; • the effects of the horizontal directional drill (HDD) operations on noise levels at the residences on the western shore of the Taunton River along the western pipeline route should be addressed; • the effects of LNG ships on noise levels at nearby residences, especially during nighttime hours, should be addressed; • the EFSB asked if the plant entrance would be moved to a different location and if truck traffic into and out of the facility would be changed; • the effects of the LNG facility operations on noise levels at nearby residences should be addressed; • a noise analysis would be required; according to the EFSB, MA DEP may require that noise not exceed 10 dBA above background; • if a flashing light is required on top of the storage tank, the EFSB is concerned about the visual effects of the light on nearby residences; • a visual analysis should be conducted and should include both leaf on and leaf off conditions; • the EIR/EIS should address how construction materials would be delivered to the site (*e.g.*, barge, rail, or truck); • a landscaping plan for the LNG terminal should be prepared and addressed in the EIR/EIS; • the potential for the proposed on-site dredged material mounds to block the neighbors view of the river should be addressed; • potential dust and odor from on-site dredge disposal should be addressed; • if pile driving is needed, then noise impacts associated with pile driving should be addressed; • the EIR/EIS should address safety associated with the LNG storage tank and ships; • WCE should develop contingency plans in the event of accidents and emergencies; • these plans should be developed in coordination with state and local officials and must be completed prior to operations; • WCE should consult with SHPO on historic properties and cultural resources in project area; • tree clearing associated with construction of the western pipeline along the exiting powerline could create visual impacts for adjacent residents, which should be addressed; • residential impacts associated with construction of the western and northern pipelines should be addressed; • potential impacts on state forest and a bioreserve on eastern pipeline route should be evaluated; • EFSB expressed concerns regarding potential constructability issues within the existing pipeline easement along the railroad on the northern pipeline route; • EFSB asked if the project could use just one pipeline; • EFSB also asked if the Algonquin pipeline system would need to be expanded.

Agency	Comment/Issue/Question
July 28, 2003 Massachusetts Department of Environmental Protection (DEP); Office of Coastal Zone Management (CZM)	1. NEPA and MEPA coordination issues - under NEPA, applicant is not allowed to review draft EIS before publication, which is inconsistent with the MEPA process but the NEPA pre-filing process may help resolve this difference; 2. the Expanded Environmental Notification Form (ENF) submitted for the Weaver's Cove LNG Project adequately identified all the DEP permits needed for the project; 3. DEP cannot issue permits until 60 days after the EIR is published; 4. DEP permit process provides for a single point of contact through 401Water Quality Certification Program; 5. dredging in the Taunton River would be a primary issue of concern for the DEP; 6. dredging activities must meet state water quality standards; 7. all permit-related issues need to be addressed during the EIR/EIS process and dredging and dredge disposal issues need to be addressed in detail; 8. DEP is required to provide comments on the ENF or lose the opportunity to comment later in the process; 9. based on agency and public comments, MEPA will prepare a scope for the EIR which could be used for preparation of the EIS; 10. DEP expressed concern with adding new contaminants from the sediments to a site with existing contamination issues (DEP indicated that this may not be consistent with anti-degradation requirements of draft rules); 11. the evaluation of upland disposal of dredged material must take into consideration both compliance criteria and anti-degradation requirements; 12. disposal of dredged material on-site must be consistent with on-going remediation efforts and not create problems for further clean up of the site; 13. WCE needs to consult with NMFS and DMF on anadromous fish issues, and dredging timing windows and other mitigative measures; 14. DEP recommended evaluating a phased dredging approach to minimize impacts on fish; 15. permit conditions for dredging activities would be developed based on an analysis of fish, economics, and constructability issues; 16. cumulative impacts should be addressed, including impacts associated with the warmwater discharge from the Brayton Point Power Plant; 17. the amount and limits of dredging, including any over-dredging, must be identified and justified for both the channel and the turning basin and mitigative measures must also be described; 18. dredging deeper than the authorized depth of 35 feet would be considered improvement dredging rather than maintenance dredging; 19. CZM will review ENF and provide comments to MEPA; 20. CZM will work closely with MEPA on scoping the EIR; 21. CZM cannot complete its Federal consistency review until after the MEPA certification and cannot make a final determination until after the Chapter 91 permit is issued; 22. Section 404/10 permit cannot be issued until after the CZM consistency review is completed; 23. see attached July 25, 2003 and July 28, 2003 DEP Memorandums for additional comments on the proposed Weaver's Cove LNG Project.
July 30, 2003 Massachusetts Division of Marine Fisheries (DMF)	• attended meeting with U.S. Army Corps of Engineers and other Federal agencies; see comments below

Agency	Comment/Issue/Question
Federal Agencies	
July 30, 2003 U.S. Army Corps of Engineers - New England District (COE); U.S. Environmental Protection Agency - Region 1 (EPA); National Marine Fisheries Service - Northeast Regional Office (NMFS)	• the moving safety zone around the LNG ships and its effects on other ship traffic (*e.g.*, fishing boats) should be addressed; • the need for and the establishment of a safety zone around the LNG terminal should be addressed; • the limits of dredging and the amount of over dredging that is needed should be clearly specified; • WCE needs to clarify target dredging depth versus overdredging versus advanced maintenance dredging; • WCE needs to define target depth for navigational purposes; • WCE needs to provide justification for dredging below the target depth; • a determination of the siltation rate in the channel would assist WCE in development of the proposed project dredging depth; • if more dredging is required than specified in the ENF, the disposal of the additional dredged material would be of concern and should be addressed; • COE recommends that the emphasis be on the total area affected by dredging rather than the total volume of material dredged when describing dredging operations; • the assessment should take into consideration side slopes and sloughing when determining the total area affected by dredging; • future maintenance of the Federal navigational channel and the disposal of future dredged material should be addressed; • maintenance dredging implications associated with deepening of the Federal channel below the established depth of 35 feet should be discussed; • the ability of the proposed LNG site to accommodate future dredged material should be addressed; • potential impacts of dredging the turning basin on the operations of the Montaup Power Plant is a concern which should be addressed; • the COE asked if the owners of this power plant approved of the dredging plans; • WCE should address potential impacts on the proposed LNG facility if the Brightman Street bridge construction is delayed; • the proposed treatment of the shoreline at the proposed LNG facility and how it would affect intertidal areas should be addressed; • EPA would prefer intertidal rock rather than sheetpiling along the shoreline of the proposed facility; • the EIR/EIS should address if the project would result in filling or disturbance of any salt marshes; • according to the EPA, state regulations do not allow the filling of salt marshes; • EPA recommended that salt marshes be avoided; • wetland impacts associated with construction of the LNG terminal and the pipelines should be addressed; • WCE needs to describe the two non-jurisdictional wetlands on the proposed site and explain the basis for determining that these wetlands are non-jurisdictional; • potential security at the site is a concern due to the proximity of two highways; • the Essential Fish Habitat (EFH) Assessment should address the following: - winter flounder - anadromous fish - soft shell clam - other benthic resources; • NMFS would most likely require timing restrictions on dredging operations; • WCE should consider sequencing of dredging activities to work around timing windows; • DMF requested that quahogs be included in the EFH Assessment (potential resource for relays); • the EIR/EIS needs to address cumulative impacts, including other LNG projects in the area.

WEAVER'S COVE LNG PROJECT

LIST OF ATTENDEES AT AGENCY SCOPING MEETINGS

Name	Agency/Company	Telephone Number/ e-mail Address
Rhode Island Agencies		
Ronald Gagnon	Department of Environmental Management, Office of Technical and Customer Service	(401) 222-4700 Ext. 7500 rgagnon@dem.state.ri.us
Danni Goulet	Coastal Resources Management Council	(401) 783-3370 dgoulet@crmc.stat.ri.us
Massachusetts Agencies		
Diedre Matthews	Energy Facility Siting Board	(617) 305-3729 diedre.matthews@state.ma.us
Jolette Westbrook	Energy Facility Siting Board	(617) 305-3525 jolette.westbrook@state.ma.us
Bill Febiger	Energy Facility Siting Board	(617) 305-3727 william.febiger@staate.ma.us
Selma Urman	Energy Facility Siting Board	--
Amy Barab	Energy Facility Siting Board	--
Steve Lipman	Department of Environmental Protection, Commissioner's Office	(617) 292-5698 steven.lipman@state.ma.us
Yvonne Unger	Department of Environmental Protection, Division of Watershed Management	(617) 292-5893 yvonne.unger@state.ma.us
Jane Mead	Executive Office of Environmental Affairs, Office of Coastal Zone Management	(617) 626-1219 jane.mead@state.ma.us
Stephanie Cunningham	Division of Marine Fisheries	(978) 282-0308 Ext. 133 stephanie.cunningham@state.ma.us
Federal Agencies		
Bob Arvedlund	Federal Energy Regulatory Commission	(202) 502-8091 robert.arvedlund@ferc.gov
Chris Zerby	Federal Energy Regulatory Commission	(202) 502-6111 chris.zerby@ferc.gov
Heather Ferree	Federal Energy Regulatory Commission	(202) 502-6414 heather.feree@ferc.gov
Brian Valiton	U.S. Army Corps of Engineers, New England District	(978) 318-8166 brian.e.valiton@usace.army.mil

Name	Agency/Company	Telephone Number/ e-mail Address
Phillip Nimeskern	U.S. Army Corps of Engineers, New England District	(978) 318-8660 phillip.w.nimeskern@usace.army.mil
Edward Reiner	U.S. Environmental Protection Agency	(617) 918-1692 reiner.ed@epa.gov
Chris Boelke	National Marine Fisheries Service	(978) 281-9131 christopher.boelke@noaa.gov
FERC Third-Party Contractors		
Larry Brown	Natural Resource Group, Inc.	(401) 278-4301 rlbrown@nrginc.com
Randy Duncan	Natural Resource Group, Inc.	(612) 347-7876 reduncan@nrginc.com
Clint Webb	EA Engineering, Science, and Technology	(401) 736-344 cwebb@eaest.com
Brian Lesisski	EA Engineering, Science, and Technology	(401) 736-3440 clesisske@eaest.com
Weaver's Cove Energy and Consultants		
Ted Gehrig	Weaver's Cove Energy	(508) 675-9470 tgehrig@weaverscove.com
Leon Bowdoin	Weaver's Cove Energy	(508) 675-9470 lbowdoin@weaverscove.com
Ted Barton	Epsilon Associates	(978) 461-6221 tbarten@epsilonassociates.com
Les Smith	Epsilon Associates	(978) 461-6212 lsmith@epsilonassociates.com
Holly Carlson	Epsilon Associates	(978) 897-7100 hcarlson@epsilonassociates.com
Mark Cook	Baker Botts	(202) 639-7779 mark.cook@bakerbotts.com
David Rosenzweig	Keegan, Werlin & Pabian	(617) 951-1400 drosen@kwplaw.com
Cory Platt	Concept2Delivery	(919) 481-9510 cory.platt@concept2delivery.com

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
One Blackburn Drive
Gloucester, MA 01930-2298

SEP 26 2003

ORIGINAL

Magalie R. Salas, Secretary
Federal Energy Regulatory Commission
888 First St., N.E., Room 1A
Washington, DC 20426

Re: Docket No. PF03-4-000, Weaver's Cove LNG Project

Dear Secretary Salas:

The National Marine Fisheries Service (NOAA Fisheries) has reviewed the Notice of Intent to prepare an Environmental Impact Statement for the "Weaver's Cove LNG Project," and offers the following comments for your consideration. The purpose of the project is to develop and maintain an LNG import facility on the Taunton River in Fall River, Massachusetts. Components of the project include maintenance and improvement dredging of the federal navigation channel in Mount Hope Bay and the Taunton River and a turning basin, removing approximately 2.1 million cubic yards of material for upland disposal. Additionally, this project includes the removal and reconstruction of a pier associated with the facility. As proposed, the project will affect an undefined number of acres of benthic habitat. NOAA Fisheries is concerned that substantial impacts on essential fish habitat (EFH) and living marine resources within the Taunton River will result if the project proceeds as proposed. We are pleased that the Federal Energy Regulatory Commission (FERC) is seeking public input during its scoping process for the Weavers Cove LNG Project Draft Environmental Impact Statement (DEIS), and offer the following comments for your consideration.

Essential Fish Habitat

Essential fish habitat (EFH) has been defined as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (50 CFR 600.10)." The Taunton River has been designated as EFH under the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) for 14 federally managed species, including the commercially and recreationally important winter flounder (*Pseudopleuronectes americanus*). Adult winter flounder utilize this area for spawning and feeding, while eggs, larvae, and juveniles utilize this area for early life stage development. The substrate found here also serves as habitat for benthic organisms, such as shellfish, marine worms, and numerous other important living marine resources. These organisms contribute to the productivity of the federally managed species by serving as a food source for both juvenile and adult life stages of these finfish. Furthermore, the Taunton River serves as an important migratory pathway for several species of anadromous fish. Species such as alewife, rainbow smelt, and blueback herring utilize this habitat as passage to upstream spawning locations. The catadromous

American eel also uses this water body for growth to maturity before migrating to the marine environment to spawn. Construction activities and associated sediment plumes have the potential to impair migration of anadromous species, and may affect egg, larval, and juvenile stages of development for species that spawn in the project footprint area. To protect these valuable public trust resources, NOAA Fisheries recommends that the following issues be addressed within the DEIS:

Biological Survey

In order to fully characterize the living marine resources present within the project area, a site-specific biological survey should be required. Included in this biological survey should be finfish, shellfish, and benthic invertebrates present within the construction dredge footprint. This survey will assist in the evaluation of alternatives by identifying EFH that would be adversely affected during the construction phase as well as through project maintenance in the future. Furthermore, a site-specific biological survey would identify critical habitat areas for living marine resources, which may be avoided through alterations to the project footprint.

Dredged Material Disposal

The current project proposes to dredge approximately 2.1 million cubic yards of material from Mount Hope Bay and the Taunton River with upland/on-site disposal. The FERC Notice of Intent suggests that if the material is unsuitable for the upland site, then the disposal method could include confined aquatic disposal, confined disposal, or ocean disposal. In order to determine the preferred method of disposal, a sediment characterization should be performed for the DEIS. Depending on the preferred method of disposal identified, there may be significant impacts on EFH. The evaluation of alternatives for the DEIS should fully explore the potential impacts on EFH resulting from both upland and in-water disposal options.

Over-Dredge Allowance

NOAA Fisheries is concerned that the over-dredge allowance concept is not being utilized correctly in the Weaver's Cove proposal. The 2-foot over-dredge allowance provided for in this project is in place for potential dredge operator error. For this project, the federal navigation channel is congressionally authorized to a depth of 35 feet. On page four of the expanded Environmental Notification Form (#13061) submitted to the Massachusetts Executive Office of Environmental Affairs on June 30, 2003, the proponents state their intentions to dredge to a depth of 37 feet (35 feet as authorized plus 2 foot over-dredge). By using the over-dredge allowance in a manner contrary to its intentions, the proponents are now targeting a dredge depth of 37 feet. Thus, it is anticipated that even areas of the channel and turning basin that are currently at or near the authorized depth will now be dredged to the extent of the allowable over-dredge. In the DEIS, the applicant should clarify the target depth of dredging that is required for LNG vessels. If the target depth for the federal navigation channel is greater than 35 feet, then that portion of the project should be characterized as improvement dredging. As you

are aware, improvement dredging refers to dredging that occurs in areas that have not been previously dredged, or to a depth that is not currently authorized by Congress. Maintenance dredging, however, refers to dredging in areas that have been previously dredged, and that work is being performed to "maintain" the existing depth. NOAA Fisheries believes that by targeting any depth below the authorized channel depth, the project should be considered improvement dredging rather than maintenance dredging and should be addressed accordingly in the DEIS analysis of alternatives.

Project Sequencing

In order to avoid direct impacts on public trust resources as a result of the proposed dredging in the federal navigation channel and turning basin, the project should utilize a sequencing approach. Project sequencing should include time of year work restrictions for vulnerable life stages of species located within the project footprint for construction, as well as for maintenance and operation of the proposed facility. These restrictions should consider habitats immediately adjacent to and within the predicted sediment plume, may be guided by the number of machines working at a given time, and may include no work windows for the entire project, if necessary. In order to avoid adverse impacts on EFH, this project sequencing approach should be developed in accordance with the above referenced biological survey.

Compensatory Mitigation

NOAA Fisheries utilizes a three-tiered approach in our review of projects such as this. First, we advocate that adverse impacts on EFH should be avoided. Second, if the project is to occur, then steps should be taken to minimize the adverse effects on EFH. Finally, if the proposed project moves forward and adverse impacts on fishery resources occur, then NOAA Fisheries expects that compensatory mitigation be explored, pursuant to the 404(b)(1) guidelines of the of the Clean Water Act. The DEIS should evaluate alternatives for compensatory mitigation for the unavoidable loss of fishery resources, based on the findings of the above referenced biological survey.

Cumulative Impacts

NOAA Fisheries has concerns regarding the potential for cumulative impacts on EFH resulting from this project. For example, the Mount Hope Bay/Taunton River complex is important habitat for winter flounder spawning, yet populations remain stressed due to a host of anthropogenic impacts occurring in the region. Additional stressors to this ecosystem, such as the proposed project, may have significant adverse effects on fishery resources. A cumulative impact assessment should address the incremental impact of the Weaver's Cove project on EFH, when added to past, present, and reasonably foreseeable future actions in the Mount Hope Bay/Taunton River complex. NOAA Fisheries believes that such an assessment should occur in accordance with the DEIS analysis of alternatives.

EFH Assessment

Pursuant to section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act, federal agencies must consult with NOAA Fisheries regarding any of their actions authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken that may adversely affect EFH. As such, NOAA Fisheries believes that this project, as proposed, may result in substantial adverse effects on EFH. Therefore, an expanded EFH assessment must be submitted for this project. Projects of this type also require appropriate permits under the regulatory authority of the Army Corps of Engineers (ACOE). NOAA Fisheries would also conduct an EFH consultation with the ACOE and would provide EFH conservation recommendations consistent with those provided to FERC. Pursuant to the EFH Final Rule [50 CFR 600.920(e)(3)&(4)], this expanded EFH assessment should include: 1) a description of the action; 2) an analysis of the potential adverse effects of the action on EFH and the managed species; 3) the ACOE's conclusions regarding the effects of the action on EFH; and 4) proposed mitigation, if applicable. Furthermore, this expanded EFH assessment should include the following information:

1) The results of an on-site inspection to evaluate the habitat and the site-specific effects of the project.
2) The views of recognized experts on the habitat or species that may be affected.
3) A review of pertinent literature and related information.
4) An analysis of alternatives to the action. Such analysis should include alternatives that could avoid or minimize adverse effects on EFH.
5) Other relevant information.

Upon the receipt of a complete and adequate EFH assessment, NOAA Fisheries will provide conservation recommendations to minimize the adverse effects on fishery habitats, pursuant to the EFH Final Rule (50 CFR 600.925).

Conclusions

In summary, NOAA Fisheries appreciates the efforts of the FERC to gather public comments regarding the Weaver's Cove LNG Project DEIS. We believe that this process will assist in the development of the full range of alternatives to be analyzed. NOAA Fisheries has determined that an expanded EFH assessment should be developed and submitted for this project. We recommend that a site-specific biological survey be performed in order to characterize the living marine resources present at the site. We recommend that the total amount of benthic disturbance be better characterized by including the overdredge allowance in the calculation, and that this project be reviewed as improvement dredging. We recommend that the proposed project should utilize project sequencing to avoid direct impacts on public trust resources. NOAA Fisheries recommends that compensatory mitigation be required for any unavoidable loss of public resources. Finally, we recommend that a cumulative impact assessment be included in

any decision-making document. Thank you for your continued coordination with NOAA Fisheries on projects such as this. If you have any concerns regarding these comments, please contact Chris Boelke at 978-281-9131.

Sincerely,

Peter D. Colosi
Assistant Regional Administrator
for Habitat Conservation

US ACOE – Brian Valiton
MA DMF - Vin Malkoski
MA DMF – Paul Diodati
MA DEP – Yvonne Unger
MA CZM – Tom Skinner
MA CZM - Rebecca Haney
NEFMC – Leslie-Ann McGee
US EPA – Phil Colarusso

File: MA/Fall River

ORIGINAL

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
One Blackburn Drive
Gloucester, MA 01930-2298

MAY 21 2004

Mr. John Felix
Deputy Associate Commissioner
MA Department of Environmental Protection
Commissioner's Office
One Winter Street
Boston, MA 02108

CP04-36-000

Attn: Ms. Yvonne Unger
Division of Wetlands and Waterways

Re: Weaver's Cove Energy, LLC, DEP 401 Water Quality Certification Application

Dear Mr. Felix:

The National Marine Fisheries Service (NOAA Fisheries) has reviewed the 401 Water Quality Certification application by Weaver's Cove Energy, LLC, for the dredging of the Mount Hope Bay – Fall River Harbor Federal Navigation Channel and Turning Basin. This dredging project is associated with the development of a Liquefied Natural Gas (LNG) facility in Fall River, Massachusetts. Weaver's Cove Energy, LLC, proposes to remove approximately 2.5 million cubic yards of material from the channel and turning basin with placement of material on-site. NOAA Fisheries is working as a cooperating agency with the Federal Energy Regulatory Commission (FERC) in the development of the Environmental Impact Statement (EIS), and has provided extensive comments regarding foreseeable effects to essential fish habitat (EFH). We will be providing EFH conservation recommendations to FERC upon receipt of the EIS, and to the US Army Corps of Engineers (ACOE) upon receipt of the Public Notice. In this regard, NOAA Fisheries offers the following comments for your consideration.

The primary sections of this 401 Water Quality Certification application that are of concern to NOAA Fisheries are Attachments C, D, and E. Each of these sections has been incorporated by reference from the ACOE Joint Section 10/404 Individual Permit Application. In general, the following comments of NOAA Fisheries refer to information contained therein.

General Comments

The Taunton River/Mount Hope Bay Complex has been designated as EFH for a number of federally managed species, including the commercially and recreationally important winter flounder (*Pseudopleuronectes americanus*). This area serves as an important winter flounder spawning and juvenile development habitat. In addition, the Taunton River serves as an important migratory pathway for a number of anadromous fishery resources such as Alewife (*Alosa pseudoharengus*), blueback herring (*Alosa aestivalis*), rainbow Smelt (*Osmerus mordax*), and American shad (*Alosa sapidissima*). These resources are prey for a number of federally managed fishery resources. Furthermore, Mount Hope Bay and the Taunton River serve as habitat for the commercially and recreationally important Northern quahog (*Mercenaria mercenaria*). This and

other shellfish species serve as forage for fishery resources in the area and are important linkages within the marine ecosystem. NOAA Fisheries is concerned that suspended sediments resulting from the construction and operations associated with the proposed project will have adverse effects on EFH and living marine resources. The resulting impact to prey species is considered an adverse impact on EFH. In addition, the volumes of dredged material have been underestimated and, therefore, a reasonable assessment of disposal options has not yet been presented. Should the on-site disposal option prove inadequate, NOAA Fisheries has concerns with in-water disposal of the dredged material.

Modeling of suspended sediments

NOAA Fisheries has provided comments to FERC regarding the Weaver's Cove LNG dredging program and suspended sediment modeling. These comments described a number of issues, calling specific attention to the inputs utilized in the SSFATE model. The inputs utilized include depth of winter flounder spawning habitat, depth of sediment impacts on winter flounder eggs, and rate of winter flounder embryo development.

NOAA Fisheries commented that the depth of winter flounder spawning areas has been underestimated in the dredging modeling report. Throughout the 401 Water Quality Certification document and the ACOE 10/404 permit application, the applicant has stated that winter flounder spawning only occurs in water depths less than five meters. We have previously recommended that the applicant utilize a depth of eight meters for inputs into the SSFATE model in order to account for variability in depth of spawning areas. Attachment F of the ACOE 10/404 permit application (as referenced) states that the applicant will not be accepting the recommendation to increase the winter flounder spawning depth due to lack of published data. However, NOAA Technical Memorandum NMFS-NE-138 (EFH Source Document) indicates variability in the depth of winter flounder spawning habitats. The EFH Source document describes winter flounder "spawning can occur at depths of less than five meters to more than 45 meters on Georges Bank." While winter flounder spawning occurs at these shallower depths, a review of the EFH Source document describes evidence of spawning activity in deeper environments. Due to the wide variability of this spawning activity, NOAA Fisheries maintains that utilizing a 5 meter depth criterion for winter flounder spawning as an input to the SSFATE modeling program does not adequately assess the potential impacts on the resource. By utilizing greater depths that account for this variability of winter flounder spawning depths, the aerial extent of EFH impacts will increase and thus indicate greater impacts on EFH.

The ACOE 10/404 application (by reference) discusses the use of a 0.5 mm threshold depth for impacts on winter flounder eggs in the SSFATE model, per earlier recommendations by NOAA Fisheries. While this threshold has been apparently accepted, NOAA Fisheries remains concerned that a 1.0 mm threshold remains in Table 1 of the March 4, 2004 EFH memorandum, and throughout the referenced document. Page 92 of Attachment E (10/404 application) outlines assumptions for winter flounder egg burial threshold and indicates the use of 1.0 mm. As stated within the EFH Source Document, winter flounder eggs range in size from 0.74-0.85 mm in diameter. At sediment deposition depths greater than 0.5 mm, winter flounder eggs can be adversely affected due to suffocation.

Last, page 92 of Attachment E (10/404 application) describes the maximum duration of exposure of winter flounder eggs to sediment that would have adverse effects. This maximum duration of exposure is related to the rate of embryo development in winter flounder. This rate of embryo development for winter flounder eggs presented within the SSFATE model assumes a lower bound estimate of 21 days. The rate of embryo development for winter flounder eggs is temperature dependent and egg hatching can be protracted for up to 40 days. NOAA Fisheries concludes that the 21-day development period value does not represent an accurate incubation period and, therefore, underestimates the potential impacts on winter flounder eggs, and an appropriate incubation time needs to be reevaluated for the model input.

At this time, NOAA Fisheries remains concerned that conclusions presented on Page 99 of Attachment E (10/404 application) regarding the effects of suspended sediments are not accurate. We believe that this modeling process does not accurately account for the variability of winter flounder spawning as characterized in the NMFS EFH Source document. Adequate and representative inputs to the SSFATE model are required so that impacts on winter flounder EFH are adequately characterized.

Overdepth dredging

Table 1-1 of the 401 Water Quality Certification application describes a one-foot overdredge volume of 461,000 cubic yards. However, NOAA Fisheries is concerned that this limit is underestimated and it is unlikely that one foot of overdredge can be maintained during project construction. In our opinion, the allowance of a one-foot overdredge may not be realistic at these depths. In other projects with similar depths within federal navigation channels, the ACOE has argued for industry standards that utilize allowances of a two-foot overdredge to account for the imprecise nature of dredging operations. To present a more realistic picture of dredge volumes that will need disposal, we recommend that a two-foot overdredge be anticipated for calculating dredge volumes. In this case, the overdredge volume should be estimated at approximately 922,000 cubic yards and a total volume of dredged material in excess of 3 million cubic yards.

Dredge volumes and disposal options

Page 5 of the 401 Water Quality Certification notes that dredged material will be placed on-site. As stated above, we are concerned that the total volume of dredged material to be handled has been underestimated. Furthermore, it is not clear whether the reported volume accounts for the "bulking" factor that results from normal handling of dredged materials or the addition of Portland Cement for sediment augmentation/stabilization. This additional volume of material should be accounted for in the overall volume of material that needs to be disposed. Accurate calculations of disposal volumes will allow identification of realistic disposal options. The applicant should determine that they will be able to utilize this volume of material on-site and if not, should be able to describe reasonably available disposal options. Any analysis of disposal options within the 401 Water Quality Certification application should include thresholds for contaminants at all alternative sites, including any in-water alternatives. Earlier project documents indicate that the sediments from this project have elevated levels of Mercury, PAH's, and salt content, and may present challenges if placed off-site. In addition, present data indicate much of the sediment will be found unsuitable for unrestricted open water disposal at any offshore site.

Anadromous fishery resources

Attachments A, E, and F of the ACOE 10/40 permit application (as referenced) briefly discuss fishery resources present within the Taunton River, but do not adequately consider the potential impacts on anadromous fishery resources resulting from dredging or facility operations. Construction activities and associated sediment plumes have the potential to impair migration of anadromous species, and may affect egg, larval, and juvenile stages of development for species that spawn in the project footprint area. The Taunton River serves as an important migratory pathway for several species of anadromous fish, including alewife, blueback herring, rainbow smelt, and American shad, that utilize this habitat as passage to upstream spawning locations. These anadromous fishery resources serve as prey for a number of federally managed species and are considered a component of an EFH assessment pursuant to the Magnuson-Stevens Fishery Conservation and Management Act.

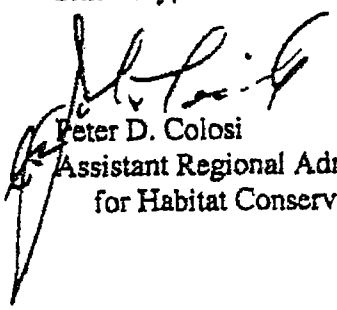
Shellfish resources

Attachment E of the ACOE 10/404 Permit application notes that the project area serves as habitat for shellfish species including the Northern quahog (*Mercenaria mercenaria*), American (eastern) oyster (*Crassostrea virginica*), and soft-shelled clams (*Mya arenaria*). Shellfish from portions of this area, once depurated, are a viable food source and are suitable for human consumption. Furthermore, shellfish resources serve as prey for a number of federally managed fish species and should be considered within the EFH assessment. The proposed dredging project has potential impacts on shellfish resources through both direct losses from dredging operations as well as sediment-related impacts prior to and during spawning periods. NOAA Fisheries is concerned that the document has not adequately considered adverse impacts on these resources, nor proposed mitigation to offset any loss of shellfish resources.

Conclusions

Based on the information above, NOAA Fisheries remains concerned that the proposed project will have adverse effects on a number of living marine resources, including commercially and recreationally important resources under federal and state stewardship. Specifically, we believe that adverse impacts on these public trust resources have not been adequately characterized within the SSFATE modeling process, dredging volumes and disposal options have not been fully explored, and analysis of adverse impacts on anadromous and shellfish resources has been limited. If you would like to discuss these comments, please contact Chris Boelke at 978-281-9131.

Sincerely,



Peter D. Colosi
Assistant Regional Administrator
for Habitat Conservation

cc: Paul Diodati, MA DMF, Boston
Vincent Malkoski, MA DMF, Pocassett
David Janik, MA CZM
Frank Pendleton, US FWS
Timothy Timmermann, US EPA
Brian Valiton, US ACOE
Magalie Salas, FERC ✓
Rich McGuire, FERC

Commonwealth of Massachusetts
Division of Marine Fisheries
251 Causeway Street • Suite 400
Boston, Massachusetts 02114
(617) 626-1520
fax (617) 626-1509

Paul J. Diodati
Director

June 8, 2004

Mitch Ziencina
Department of Environmental Protection
Wetlands and Waterways Program
20 Riverside Drive
Lakeville, MA 02347

Re: Weaver's Cove Energy LNG Import Terminal Dredging Chapter 91 Waterways License Application (#W050847)

Dear Mr. Ziencina:

The Division of Marine Fisheries (*MarineFisheries*) has reviewed the Chapter 91 Waterways License (Ch 91) Application from Weaver's Cove Energy, LLC to conduct maintenance and improvement dredging during the construction of a liquefied natural gas (LNG) import terminal along the Taunton River in Fall River. We offer the following comments and resource information for your consideration.

As noted in previous correspondence, the Taunton River provides valuable habitat for a diverse assemblage of finfish and invertebrates. In recognition of the extremely productive quahog (*Mercenaria mercenaria*), soft shelled clam (*Mya arenaria*), and American oyster (*Crassostrea virginica*) found within and adjacent to the proposed project footprint, these portions of the Taunton River have been characterized by *MarineFisheries* as "Significant Shellfish Habitat" and therefore afforded protection under the Wetlands Protection Act (310 CMR, 10.34).

In addition, diadromous fish species including blueback herring (*Alosa aestivalis*), alewife (*Alosa pseudoharengus*), American shad (*Alosa sapidissima*), hickory shad (*Alosa mediocris*), gizzard shad (*Dorosoma cepedianum*), rainbow smelt (*Osmerus mordax*), white perch (*Morone Americana*), striped bass (*Morone saxatilis*), American eel (*Anguilla rostrata*) and the endangered Atlantic sturgeon (*Acipenser oxyrhynchus*) use all or some of the Taunton River for passage, spawning, nursery, and forage habitat. Many of these species provide forage for other predatory fish and may themselves be harvested by recreational and commercial fishermen. Finally, various life stages of numerous other finfish species such as winter flounder (*Pseudopleuronectes americanus*), Atlantic menhaden (*Brevoortia tyrannus*), tautog (*Tautoga onitis*), and bluefish (*Pomatomus saltatrix*) also transit and/or inhabit the river during the year.

- *MarineFisheries* is concerned that the sediment modeling performed to evaluate potential fisheries impacts from dredging and construction underestimates these impacts. The amount of field data collected for use in the model is inadequate when attempting to model for an activity that is proposed to occur year-round for up to three years. Additionally, there continues to be no inclusion of natural inputs such as rainfall, runoff, etc. The Taunton River receives inputs from many sources and the proposed dredging activity will contribute to the overall condition.

- Underestimation of potential impacts resulting from use of this model does not support the proposed dredging/construction restrictions offered in place of traditional time-of-year (TOY) windows and project sequencing within the Taunton River.

- As has been noted by *MarineFisheries* and NOAA Fisheries, the description of potential winter flounder spawning habitat is incorrect and greatly underestimates the amount of area that may be altered. The applicant's claims that the Turning Basin area is too deep for successful winter flounder spawning and egg deposition have no basis.

- The regular passage of LNG tankers to the planned Weaver's Cove facility will likely cause additional impacts via the resuspension of sediments during transit. Such events have been observed following the passage of the smaller coal ships to Brayton Point and passage of LNG tankers through Boston Harbor. Wilber & Clarke (2001) reported that the passage of very large vessels through dredged channels can increase suspended sediments up to 5x the background levels. Increased turbidity can greatly hinder fish spawning and larval survival, and can retard juvenile development. Benthic invertebrates such as clams and quahogs can become deeply buried or suffer mortality caused by clogging of their respiratory systems. This issue is not addressed in the Ch 91 application.

- Claims that dredging/construction impacts will be temporary and minimal in nature cannot be supported when discussing a nearly continuous three-year dredging/construction cycle, followed by the weekly passage of ships large enough to resuspend sediments along the entire Mount Hope Bay/Taunton River passage. This is particularly problematic when evaluating potential impacts to fishing and fowling and the habitats that support these resources.

- Previous documents provided by the applicant detailed the use of public landings and rights of way in the Mount Hope Bay area as staging areas for construction and dredging activities. The extent and duration of the loss of public access caused by these activities is not discussed in the Ch 91 application package.

- Similarly, Mount Hope Bay supports extensive recreational boating and fishing activity during the warmer months that may be disrupted by the presence of large dredge barges and support craft.

Literature cited: Wilber, D.H. and D.G. Clarke. 2001. Biological effects of suspended sediments: a review of suspended sediment impacts on fish and shellfish with relation to dredging activities in estuaries. North American Journal of fisheries Management 21:855-875.

Questions regarding this review may be directed to Vin Malkoski in our Pocasset office at (508) 563-1779, ext. 119.

Sincerely,

Paul J. Diodati
Director

cc: Representative David B. Sullivan
Mayor Edward Lambert, City of Fall River
David Swearingen, FERC
Brian Valiton, USACE
Theodore Barton, Epsilon Associates
Tim Timmerman & Eric Nelson, US EPA
Chris Boelke, NMFS
John Felix, DEP
Alexander Strysky, MCZM
Hickey, Whittaker, Sawyer, & Brady, MDMF

In Reply Refer To:
OEP/DG2E/Gas 1
Weaver's Cove LNG Project
Docket No. PF03-4-000
§ 375.308(x)

December 8, 2003

Ted Gehrig, President
Weaver's Cove Energy, LLC
One New Street
Fall River, MA 02720

Re: Staff's Comments on Resource Report No. 10

Dear Mr. Gehrig:

We have reviewed your Resource Report No. 10 that was filed on November 13, 2003, for the planned Weaver's Cove LNG Project in Fall River, Massachusetts. Enclosed are the staff's comments on this report. Please revise your draft report to include the clarifications or missing information, as identified in the enclosure, when completing the final Report. Provide all necessary information to ensure compliance with the Commission's minimum filing requirements (18 CFR 380.12 and Appendix A to Part 380).

Thank you for your cooperation.

Sincerely,

Chris Zerby
Environmental Project Manager
Office of Energy Projects

Enclosure

cc: Public File, Docket No. PF03-4-000

Brian Valiton, U.S. Army Corps of Engineers
Arthur Pugsley IV, Massachusetts Executive Office of Environmental Affairs
Tim Timmerman, U.S. Environmental Protection Agency
Larry Brown, Natural Resource Group, Inc.

Docket No. PF03-4-000 ENCLOSURE

Comments on Draft Resource Report 10

1. Section 10.3.2 of Resource Report 10 includes a discussion of locating an LNG terminal within geographic proximity to the New England gas market. Supplement this discussion with additional information on the maximum distances Weaver's Cove Energy could economically provide LNG via tanker truck to New England peakshaving facilities.

2. Clarify why and when Weaver's Cove Energy approached USGen regarding the availability of the Brayton Point site.

3. Provide an environmental, engineering, and economic analysis of alternative LNG terminal designs or layouts that would avoid, minimize, or mitigate impacts on the following resources:

   a. visual (*e.g.*, compare the proposed tank design to one where two or more smaller tanks are used and to one where the tank profile is reduced);
   b. forest vegetation (*e.g.*, compare the proposed layout to one where the administration building and access road are located in previously disturbed areas to the south of the currently proposed location);
   c. salt marsh and bordering wetland vegetation (*e.g.*, compare the proposed layout to one where the tank and fill are setback further from the waters edge).

4. Provide an environmental, engineering, and economic analysis that compares the LNG terminal design with on-site versus off-site disposal of dredged material (*i.e.*, what are the issues/impacts at the site if an alternative disposal site was used). See the attached table.

TABLE 1

Environmental, Economic, and Engineering Comparison of LNG Terminal Site Design With and Without on-site Disposal of Dredged Materials

Comparison Factor	On-site Disposal	Off-site Disposal
Environmental		
- Area Required	(XX acres)	(XX acres)
- Groundwater Remediation	(modification to current system, reduced groundwater recharge?)	(maintenance of current system?)
- Forest Clearing	(XX acres of forest clearing)	(XX acres of forest clearing)
- Wetland	(XX acres of wetland fill)	(XX acres of wetland fill)
- Visual	(tank height)	(tank height, lack of berm for screening)
- etc.	(other environmental issues)	(other environmental issues)
Economic	(project cost)	(range of project costs depending on disposal options)
Engineering	(advantages or disadvantages associated with engineering/technical issues – e.g., extensive site prep)	(advantages or disadvantages associated with engineering/technical issues – e.g., minimal site prep)

ESS Group, Inc.

Engineers
Scientists
Consultants

888 Worcester Street
Suite 240
Wellesley
Massachusetts
02482
p 781.431.0500
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July 8, 2004

John Felix, Deputy Associate Commissioner
Department of Environmental Protection
One Winter Street, Second Floor
Boston, MA 02108

Mitch Ziencina, Waterways Program
Department of Environmental Protection
Southeast Regional Office
20 Riverside Drive
Lakeville, MA 02347

RE: Weaver's Cove Energy, LLC;
Comment Submission of the City of Fall River

Dear Mr. Felix and Mr. Ziencina:

Enclosed please find for the Department's consideration the comments of the City of Fall River addressing the Water Quality Certification Requests and Chapter 91 Permit and License applications submitted by Weaver's Cove Energy, LLC for the proposed dredging program and the development of an LNG terminal and associated pipelines and infrastructure.

Please do not hesitate to contact me at (781) 489-1124 if you have any questions or wish any additional information concerning this submission.

Sincerely,

Carol R. Wasserman
Director of Regulatory Strategies

cc: Lealdon Langley, Waterways Program Director – DEP Boston (w/o attachments)
Gary Moran, Regional Director – DEP SERO (w/o attachments)
Tena J. Davies, Wetlands and Waterways – DEP SERO (w/o attachments)

Office of the Mayor, City of Fall River

The following comments, which are being submitted by the City of Fall River, collectively address the issues presented by the following applications submitted to the Department by Weaver's Cove Energy, LLC (WCE) for certifications and permits:

Water Quality Certification Application dated 4/26/04 – Dredging of Mount Hope Bay – Fall River Harbor Federal Navigation Channel and Turning Basin;

Chapter 91 Waterways LNG Terminal Dredging Permit Application dated 4/27/04;

Water Quality Certification Application dated 5/5/04 - Natural Gas Pipeline Laterals;

Water Quality Certification Application dated 5/7/04 – Weaver's Cove LNG Terminal Site Development; and

Chapter 91 Waterways License Application to Construct and Maintain an LNG Storage and Receiving Facility dated 5/26/04.

The comments are being submitted in one comprehensive filing in order to reflect the inherent interrelationship of the proposed dredging program with the proposed filling of over one acre of Commonwealth tidelands; the upland reuse of the dredged material, and the resulting cumulative impacts upon health, safety, public welfare, and the environment.

One threshold observation must be made at the outset concerning all of the WCE applications submitted to the Department; the technical insufficiency of the information provided for public review and comment. The applications cannot be reviewed as presented because they do not provide the necessary information to understand and evaluate the proposed activities. Specifically, the applications are incomplete concerning characterization of the nature and scope of contamination in the dredged materials, as well as the scope and extent of contamination existing at the proposed upland reuse site, which is an active c. 21E disposal site. This information is integral to any conclusion that the dredging program and upland reuse will not result in the degradation of the site and the potential for significant risk to health, safety, public welfare, and the environment.

The applications, at numerous points, reference other documents to support the conclusions presented; e.g. the U.S. Army Corps of Engineers and Massachusetts Department of Environmental Protection (DEP or the

Department) "approved"[1] Sediment Sampling and Analysis Plan (SSAP); the Tier II and Tier III sampling results, etc. While the City was able to obtain some of this information, much of it, such as the Tier II and Tier III results, has been intentionally removed from public view through assertions of "confidential business information" and "trade secrets." The applicant has the right to invoke such protections, if appropriate, but that invocation removes that information from any consideration by the public and the applications must be evaluated as if that information did not exist. This omission, therefore, renders them significantly deficient. Such information cannot at once be relied upon and then withheld from the public review process required by the Water Quality Certification regulations at 314 CMR 9.00 and the Waterways regulations at 310 CMR 9.00.

The following comments are presented under specific subject categories, rather than by individual application, given the commonality of issues presented and the requirements that must be met by WCE for all of the applications:

Dredged Materials

Historical Context

The applications claim that dredging in Mount Hope Bay and Fall River is not unusual and describe the dredging of New Bedford Harbor to remove PCB and heavy metal contamination as illustrative of the mundanity of this activity. In fact, this dredging project was part of an almost two-decade remediation of a federal Superfund site; the New Bedford Harbor PCB Site, a fact which is omitted from the applications. Therefore, it seems inappropriate to use the New Bedford Harbor dredge project to illustrate how commonplace the dredging of in excess of 2.3 million cubic yards (cys) of contaminated materials is or to conclude that such an activity presents no risk of significant impacts to Fall River.

Maintenance and Improvement Dredging Allocations

Generally, the allocations between maintenance and improvement dredging volumes have been mischaracterized. The applications propose dredging depths between 37 ft. below mean lower low water (bMLLW) to 41 ft. bMMLW to accommodate LNG tankers. As observed by DEP and the

[1] The word "approved," as used by WCE in its applications regarding the SSAP, is inaccurate when referring to DEP's role in implementing the SSAP. Included with these comments as Attachment 1 is the January 2003 letter issued by DEP to Epsilon Associates, Inc. which is limited in its approval to the statement that the plan "appears adequate for initial sediment characterization."

Massachusetts Office of Coastal Zone Management (MCZM), dredging depths greater than 35 ft. bMLLW is categorically improvement dredging; see Attachment 2; Comments of DEP and MCZM, page 3. Accordingly, the project is subject to the applicable requirements of the Wetlands Protection Act and implementing regulations at 310 CMR 10.00 as well as the Surface Water Quality regulations at 314 CMR 4.00.

In addition, the applications state that 60,000 cys, to be dredged from the Turning Basin, is maintenance dredging providing a public benefit at no cost to Fall River, rather than improvement dredging. This conclusion is based upon the claim that prior dredging activities had occurred in the vicinity. However, when this statement, which appears in the 4/26/04 WQC application, is compared to the licensing history provided in the c. 91 permit application, it appears to have no basis. Section 2.2 of the c. 91 permit application states that no license or dredging plan had been discovered by the applicant concerning prior dredging in this area.

Sediment Sampling and Characterization

Generally, the information provided in the applications concerning the chemical characterization of the dredged materials is insufficient to issue the requested certifications/permits. Simple examples of information omitted from the applications, but nonetheless required by 314 CMR 9.07 include the following:

Sediment sampling results are not compared to the thresholds required by the water quality certification regulations;

The laboratory results are not provided in the applications;

The analytical results are predicated upon statistical comparisons, not upon the required regulatory criteria.

For these reasons alone, the applications are technically incomplete.

There are specific, significant omissions and data gaps throughout the dredged materials characterizations provided in the applications, as follows:

East Channel

The applications propose to dredge 400,000 cys of contaminated material from the East Channel for upland reuse. The applications do not include information concerning any sampling or analysis performed in this area except for the work done by MCZM in 1997 as part of the Dredged

Materials Management Program (DMMP). The DMMP was an independent project with goals and objectives that were unrelated to the unrestricted filling of public tidelands and upland placement at an active disposal site, as intended by WCE. Consequently, the MCZM samples were not analyzed for the full suite of contaminants required by the Water Quality Certification regulations and the Massachusetts Contingency Plan, which could result in deterioration of water quality and degradation of conditions at the disposal site. The DMMP program was not designed to respond to this use or this disposal site.

The analyses performed by MCZM in 1997 are not reflective of current levels of contamination, seven years later. Further, the levels found by MCZM differ from those reported in the applications because the results were averaged by WCE; they were not individually reported, as was done by MCZM and as is required by the Water Quality Certification regulations. In fact, the MCZM data found contamination that included MCP S-1 exceedances for several contaminants of concern, including mercury. This finding in itself requires further sampling, given mercury levels in and around Fall River due to the proximity of the Brayton Point Power Plant.[2]

The point to be emphasized here is that the information concerning dredged materials originating in the East Channel is insufficient to allow the Department to issue the requested certifications and permits. Without the inclusion of current sample data for the required suite of analytes, reported in a manner that allows direct comparison to DEP regulatory thresholds, the applications do not comply with the regulatory requirements of the Water Quality Certification program, the Waterways program, or the Massachusetts Contingency Plan.

Sampling Program Inadequacies

The SSAP established standards DEP determined to be adequate for initial sediment sampling. WCE represents the SSAP standards to be

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[2] Brayton Point is a coal-burning generation unit that has been identified by the Department to be the most significant stationary source of mercury emissions of all coal-fired power plants in Massachusetts; see Bureau of Waste Prevention Background Document and Technical Support For Public Hearings On Proposed Amendments to 310 CMR 7.00 et. seq.: 310 CMR 7.29 Emission Standards for Power Plants (October 2003). Brayton Point, as reported by DEP, is annually emitting approximately 400lbs/year of mercury in the vicinity of Fall River. DEP's new mercury standards; 310 CMR 7.29; require Brayton Point to reduce its annual mercury emissions by 85% by 2006 and by 95% by 2012. This is a significant reduction going forward, but it cannot address existing mercury contamination in the environment. Further, until those reductions occur, Fall River will continue to be subject to exposures of significant levels of mercury. The potential risk of cumulative mercury impacts should be assessed prior to the Department issuing any approvals issued for this project.

analogous to satisfying the requirements of the Water Quality Certification program, the Waterways Program, and the Massachusetts Contingency Plan, which was not the scope or purpose of the SSAP. Even if that had been the case, the information provided in the applications demonstrates that many of the SSAP requirements were not met (see below), the utility of the MCZM samples was mischaracterized in the applications (as discussed above and below), and upland reuse would require additional site and sediment characterization not included in the SSAP (see below).

SSAP Requirements

The SSAP contemplated a sampling scheme that would achieve a density of one sample for approximately every 20,000 – 40,000 cys of dredged material removed from the Federal Channel. Based upon the information provided in the applications, sample density achieved by WCE was one sample for approximately every 58,000 cys of dredged material.

A total of 53 sample cores and 103 individual samples were proposed under the SSAP. The applications recite that 43 sample cores were collected and only 55 samples were analyzed, almost 50% less than what DEP considered "adequate for initial sediment characterization" in its January 2003 letter concerning the SSAP.

The SSAP laid out specific quality assurance/quality control procedures, which included sample preservation and archiving. Based upon the information provided in the applications, this did not occur for many of the samples collected.

The SSAP expressly provided for initial sediment characterization; additional requirements were inevitable depending upon the data collected, total cores, and ultimately, the placement, reuse or disposal alternatives determined for the proposed project. The applications present the SSAP as encompassing the final regulatory requirements for the proposed project. Such is not the case, as a review of the SSAP reveals. Even if WCE had complied with every element of the SSAP, further information, including but not limited to characterization of the proposed upland reuse site, would have had to be developed in order for the Department to issue the requested certifications and permits.

MCZM Samples

The applications mischaracterize the utility of the data collected by MCZM. The applications present the MCZM data as sufficient to meet the regulatory requirements for the proposed upland reuse as fill material.

The sampling and analysis performed by MCZM, as set forth in the SSAP, was not performed to demonstrate that the dredged material was suitable for upland reuse as fill.[3] The purpose of the MCZM program was to identify disposal options for dredged materials unsuitable for unconfined ocean disposal. What MCZM found, as set forth in the SSAP, was that almost 86% of the dredged material predicted to be generated from the Federal Channel would not be suitable for unconfined ocean disposal and would have to be disposed of through other mechanisms; landfill, other upland, Confined Aquatic Disposal (CAD) and/or Confined Disposal Facility (CDF). MCZM did not consider upland reuse as fill at the proposed, active c. 21E disposal site as part of this program. Therefore, the sampling and analysis program conducted by MCZM is unsuitable for determination of the acceptability of upland reuse of the dredged material as fill, as proposed.

Additional Upland Site Characterization

The SSAP provided that upland reuse as fill material would require specific characterization of the receiving site(s). As discussed in the next section of these comments, the applications are technically and substantively incomplete, as they fail to address the requirements of the Massachusetts Contingency Plan; 310 CMR 40.0000; applicable to the proposed filling and LNG Terminal development.

Upland Reuse, Chapter 21E and the Massachusetts Contingency Plan

The Site proposed in the applications for development and construction of the LNG Terminal is an active disposal site, regulated by the Department under c. 21E and the Massachusetts Contingency Plan (MCP). The Site is tracked by the Bureau of Waste Site Cleanup under RTN Numbers 4-0930 and 4-0749, information that is not included in the applications. The Site is subject to a Tier IC permit and is currently in Phase V, operating under Remedy Operation Status.[4]

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[3] If the dredged materials are determined to be integral to the remediation currently ongoing at the proposed upland reuse site under the Massachusetts Contingency Plan, they could be subject to the Department's requirements for Beneficial Reuse Determinations. The proposed regulations implementing the beneficial reuse program are currently in the public comment period (recently extended). If the proposed regulations do not become final before the question of use of this material as a substitute for fill comes before the Department, they will certainly be relied upon as interim guidance. The potential applicability of these requirements is not mentioned in the applications.

[4] Remedy Operation Status is defined by the MCP, at 310 CMR 40.0893, to be applicable to a disposal site where a remedial system that relies upon Active Operation and Maintenance is being operated for the purpose of achieving a Permanent Solution. This allows a site to continue progress, toward a level of No Significant Risk, but extends the MCP five-year

The Site was originally owned by the Shell Oil Company and is contaminated with oil and hazardous materials at concentrations regulated by the MCP. There is a private (non-MCP) environmental restriction recorded with the deed for the Site that limits the placement of fill materials at the Site to non-hazardous substitutes for clean fill, as approved by the Department, and prohibits any activity at the Site that would be inconsistent with maintaining a condition of No Significant Risk to health, safety, public welfare or the environment during any foreseeable period of time.

The Site is currently undergoing remediation for light non-aqueous phase liquid (LNAPL) traveling on the groundwater at concentrations greater than 0.5 inches (MCP Upper Concentration Limits) and, in some areas, at concentrations greater than 2 ft. There is an active treatment system in operation, consisting of 18 recovery wells, piping and holding tanks. The purpose of the system is to remove the LNAPL and to prevent its migration into the Taunton River.

The Department's Proposed Revised Dredging Regulations (2003), which codify the Department's long-standing interpretation and policy concerning the use of contaminated dredged materials at 21E disposal sites, provide that such materials may only be brought from another location to a disposal site as an integral part of the remedial action being conducted at the site. Reuse of in excess of 2.3 million cys of contaminated dredged materials is not part of the remedial action being implemented for this Site, as set forth in the Phase IV and Phase V Reports and LSP Opinions submitted to the Department.

Further, the Proposed Revised Dredging Regulations integrate the anti-degradation requirements of the MCP. The MCP prohibits the placement of materials contaminated at concentrations less than reporting concentrations at any location where the cumulative effect would be to increase contaminant concentrations above release notification thresholds. This anti-degradation requirement; 310 CMR 40.0032(3)(a)(b); applies to the reuse proposed in the applications. One of the fundamental inadequacies of the sampling program conducted is that WCE failed to perform analyses of all of the sediment samples for contaminants known to be present at the upland site, such as lead and individual petroleum hydrocarbons. While many of the sediment samples revealed contamination with these known constituents, because all samples were not analyzed for all known contamination, anti-degradation is a

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deadline for achieving a permanent cleanup. This status is conditioned upon the elimination of substantial hazards, careful monitoring and maintenance, regular reporting to DEP (every six months) and ensuring that no action is taken that could affect the remedial operations such as to trigger potential or actual Significant Risk.

known concern that has been expressly identified by DEP but has not been addressed by WCE. For a full discussion and explanation of the applicability to these applications of the Proposed Revised Dredging Regulations and the MCP Requirements, see Attachment 3: 9/12/03 correspondence between Steven G. Lipman, Commissioner's Office, and Larry Brown, NRG. See also Attachment 4: DEP Dredged Material Regulatory Framework.

Current Site Conditions and Anti-Degradation Requirements

The applications provide no information concerning contamination resident at the disposal site proposed to be the locations for the reuse of the dredged materials and the development of the LNG Terminal beyond the original assessment conducted by the Shell Oil Company. Without demonstrating that the proposed reuse will not create a potential Significant Risk and will not violate the anti-degradation requirements of the MCP, the Department cannot conclude that the pending applications are complete nor can the Department issue the requested approvals.

Dredging Program Management

The applications are incomplete concerning characterization of the impacts associated with implementing the proposed continuous, thirty-six month, twenty-four hour/day dredging program. Alternatives to this program which recognize state and federal fisheries and benthic habitat protection requirements are not included in the applications.

The impacts upon Essential Fish Habitat (EFH) will be discussed subsequently in these comments. What is of note about this proposal is how WCE emphasizes the interdependence of each component of the dredging program and how unworkable the program is if any one component does not proceed as scheduled. If a barge becomes unstable, a bucket malfunctions, a scow swamps, the result is cessation of the program right at that point. Piles of contaminated materials would be left in place, increasing turbidity and backflow, attracting vectors and emitting dust and odors. All of these concerns are dismissed in the applications as not being of significant concern. No comprehensive plan for materials management, including, accumulation, stockpiling, erosion control, dust, odor control, or stabilization, if any one of the interdependent processes fails to function, is provided in the applications. Considering the impacts upon water quality, human health, and quality of life, dismissing these issues as not raising significant concerns is a serious deficiency in the applications. Failing to present any practical alternatives, or to propose avoidance and minimization mechanisms means failing to comply with the most basic requirements of the Water Quality Certification Program and the Waterways Program.

This serious inadequacy is not limited to the issues raised before the Department in these applications. On 2/5/04, the Federal Energy Regulatory Commission (FERC) asked WCE to provide a figure or a table listing each dredging area and associated dates and duration of activities in each area as related to reuse production and management. The response to the FERC, which is not included in the applications, is that, "Estimating and defining the duration and schedule of the physical dredging by defined location or dredging element at this point would be difficult, particularly with upland reuse, due to uncertainties in balancing the three integral production rates – dredging – dredged material stabilization and upland reuse/stabilized dredged material placement." WCE's full response to the FERC is included here as Attachment 5.

The applicant, based on the FERC response, cannot develop a management plan. The response to the FERC goes on to state that, without implementing the proposed schedule, which, as discussed later in these comments, violates the Waterways Regulations' Resource Protection Requirements; 310 CMR 9.40(2); the dredging program cannot be implemented.

Standards to Preserve Water-Related Public Rights

The applications fail to demonstrate that the project shall preserve rights held by the Commonwealth in trust for the public to use tidelands, as required by 310 CMR 9.35. Specifically, the applications demonstrate that the project will significantly interfere with public rights of navigation, public rights of free passage over and through water, public rights of fishing and fowling in tidelands, and public rights of on-foot passage.

Resource Protection and Essential Fish Habitat

WCE has proposed scow overflow Time of Year limitations between January and April as equivalent to the protection provided the multiple fisheries resources by the prohibition in the Waterways regulations on dredging and dredged materials disposal between March 15th and June 15th. The applications do not propose an alternative that complies in any respect with the Waterways regulations concerning this prohibition.

310 CMR 9.40(2)(a) provides that no dredging activity may be performed between March 15th and June 15th of any year except upon a determination by the Division of Marine Fisheries, pursuant to M.G.L. c. 130, § 19, that such an activity will not obstruct or hinder the passage of fish. Not only has the Division of Marine Fisheries NOT provided such a determination,

it has submitted extensive comments concerning the significant, permanent, negative impacts the project will have on the fisheries. See Attachment 7.

In addition to the March 15 – June 15 prohibition on dredging activities, the regulations require that dredging activities shall minimize adverse impacts on shellfish beds, fishery resource areas, and submerged aquatic vegetation. The applications fail to demonstrate how the impacts that will inevitably result from the proposed, continuous thirty-six month, twenty-four hour/day dredging program will be avoided or minimized.

Rather than restate the objections raised by NOAA Fisheries in its 5/21/04 comments to the Department, as well as the comments submitted by the Massachusetts Division of Marine Fisheries (DMR) on its June 8, 2004 correspondence to the Department concerning the proposed dredging program and the impacts upon fisheries and fisheries' habitat, copies of those comments are included with these comments as Attachment 6 and Attachment 7, respectively, and are specifically incorporated here.

The primary points of these comments should, however, be revisited, because of their significance and the range of concerns raised by NOAA Fisheries and DMF:

NOAA Fisheries:

The Taunton River/Mount Hope Bay Complex has been designated as EFH for a number of federally managed species, including the commercially and recreationally important winter flounder. This area serves as an important winter flounder spawning and juvenile development habitat. In addition, the Taunton River serves as an important migratory pathway for a number of anadromous fishery resources such as alewife, blueback herring, rainbow smelt, and American shad. NOAA Fisheries is concerned that suspended sediments resulting from the construction and operations associated with the proposed project will have adverse effects on EFH and living marine resources. In addition, volumes of dredged material have been underestimated and, therefore, a reasonable assessment of disposal options have not yet been presented.

The depth of winter flounder spawning areas has been underestimated in the dredging modeling report. Throughout the 401 Water Quality Certification document and the ACOE 10/404 permit application [as well as in the present c. 91 permit application], the applicant has stated that winter flounder spawning only occurs in water depths less than five meters. Due to the wide variability of spawning activity, NOAA Fisheries maintains that utilizing a 5 meter depth criterion for winter flounder spawning as an input to

the SSFATE [dredging] modeling program does not adequately assess the potential impacts on the resource.

The applicant does not adequately discuss or consider potential impacts on anadromous fishery resources resulting from dredging or facility operations. Construction activities and associated sediment plumes have the potential to impair migration of anadromous species and may affect egg, larval, and juvenile stages of development for species that spawn in the project footprint area.

The proposed dredging project has potential impacts on shellfish resources through both direct losses from dredging operations as well as sediment-related impacts prior to and during spawning periods.

DMF:

Sediment modeling performed to evaluate potential fisheries impacts from dredging and construction underestimates these impacts. The amount of field data collected for use in the model is inadequate when attempting to model for an activity that is proposed to occur for up to three years.

Underestimation of total impacts resulting from the use of this [sediment] model does not support the proposed dredging/construction restrictions offered in place of traditional time-of-year (TOY) windows and project sequencing within the Taunton River. Appropriate TOY windows would be as follows:

Anadromous Species:

Alewife; inward migration – mid-March through mid-June
outward migration – June 15 through October 1

Atlantic sturgeon; inward migration – April through June
outward migration – June through November

Blueback herring; inward migration – April 15 through July 30
outward migration – September through early November

Rainbow smelt; inward migration – March 1 through May 15

White perch; inward migration – March through May

Catadromous Species:

American eel – elver (juveniles); inward migration – March 15 through June 15

Shellfish:

American oyster, spawning – mid-June through September 15

Quahog, spawning – mid-June through September 15

Soft-shell clam, spawning – May through October

Winter flounder:

Spawning and larval development – mid-January through May

Juvenile settlement and development – May through September

Description of potential winter flounder spawning habitat is incorrect and greatly underestimates the amount of area that may be permanently altered.

The claims in the application that the Turning Basin area is too deep for successful winter flounder spawning and egg deposition have no basis.

The application does not address the non-excavation impacts of dredging, including placement, management, and removal of spuds, anchors, and chain sweeps, which will affect an area many times larger than the dredge footprint, especially for quahog habitat.

The application fails to discuss cumulative impacts of dredging and construction on highly stressed species and habitat. Planned dredging will result in permanent loss of productive shellfish habitat.

Claims that dredging/construction impacts will be temporary cannot be supported when discussing a nearly continuous three-year construction cycle, followed by the weekly passage of ships large enough to resuspend sediments along the entire portion of the Mount Hope Bay/Taunton River passage.

National Wild and Scenic Rivers Program

The applications, in discussing natural resource impacts, neglect to include the information that the Taunton River, from its headwaters to Mount

Hope Bay, is under study for inclusion in the National Wild and Scenic Rivers System, which triggers the protections of Section 7 of the Wild and Scenic Rivers Act. This status will be considered by the U.S. Army Corps of Engineers in its review of the Clean Water Act Section 404 permit application required for the project, and requires consideration as a component of the Department's water quality certifications as well.

Fall River Harbor and Downtown Economic Development Plan

The applications refer to Fall River's Harbor and Downtown Economic Development Plan as being supportive and consistent with the proposed project, citing to the Plan's goal of redeveloping the Shell Oil Site. The applications fail to include the complete objective articulated by Fall River: Development of the Shell Oil Site for a range of diverse uses, including cargo (palletized goods, lumber, bulk steel, automobiles). These intended uses would become impossible if the LNG Terminal, with its extensive water and ground traffic, safety, and energy security exclusion zone requirements, were constructed at this site. Public passage, along with virtually every other use contemplated by the Fall River Plan; industrial, commercial, recreational; would be foreclosed, leaving Fall River with few economic and public benefit development alternatives.

This major negative impact upon the City of Fall River was set forth to the FERC in the 1/30/04 correspondence submitted by Mayor Edward Lambert, which is not included in the applications, for the Department's consideration. The Mayor's letter5 states:

> Weaver's Cove needs to acknowledge that Fall River has a Harbor and Downtown Economic Development Plan prepared by the Cecil Group, Inc. In that plan, as mentioned above, the Shell site is included when speaking of major redevelopment of the waterfront. An LNG facility does not fit in well with the city's plans for redevelopment of the overall waterfront and with the Shell parcel in particular.

The proposed project does not appear to be consistent with the goals and objectives determined to be in the public benefit and serving a proper public purpose, as articulated by Fall River's Harbor and Downtown Economic Development Plan.

Security and Exclusion Zones

The applications include no analysis or consideration of the detriment that will be imposed upon Fall River as the result of the safety and security zones imposed upon energy and critical infrastructure projects. These zones

are inconsistent with the use of a designated port area and will act to exclude other uses and constrain access to both the land and the seaward approaches now enjoyed by Fall River.

The U.S. Coast Guard, under its authority codified at 33 CFR Part 165, has required the establishment of safety zones, security zones, and regulated navigation areas on an expedited basis, for all critical energy infrastructure projects, for the past three years. As set forth in a recent rulemaking to safeguard LNG tankers in Cook Inlet, AK, the Coast Guard is establishing permanent security zones, including in these zones LNG tankers, marine terminals, and the maritime community within the immediate vicinity of unloading, docking, and storage facilities. The security zone established for the Cook Inlet LNG facility included a 1,000-yard radius security zone around tankers while moored at the pier.

Such security zones are antithetical to public access, diverse uses, or an expansive economic base and are contrary to the goals and objectives articulated by Fall River for its citizens in the Harbor and Downtown Economic Development Plan.

Conclusions

The applications presented to the Department are technically and substantively incomplete in significant areas. They fail to comply with the basic regulatory requirements of the Water Quality Certification program, the Waterways program, and the Massachusetts Contingency Plan.

The applications fail to provide information integral to informed public review and fail to include information relevant to the Department's considerations that has been provided to other agencies; e.g. FERC and the U.S. Army Corps of Engineers.

The applications fail to provide reasoned alternative analyses and they discount the significant risks to health, safety, public welfare, and the environment inherent to the proposed project.

9 DREDGING & DISPOSAL ALTERNATIVES CONSIDERED

Since 2002, Weaver's Cove has been investigating, evaluating, and considering alternative dredging and disposal means and methods in an effort to achieve a balance between environmental impacts, engineering and construction feasibility, and Project economics. This section describes the principal pertinent alternatives to the Proposed Action. Resource Report 10 provides a comprehensive alternatives analysis relative to the LNG Terminal and pipeline laterals.

The chart found at the end of this section is provided solely for illustrative purposes of the typical dredging and disposal alternatives, sequence and inter-relationships.

In order to meet the objectives of Weaver's Cove's Project, as outlined in Resource Report 1, there is no alternative to dredging the Taunton River. If the dredging is not undertaken LNG ships will not be able to access the LNG Terminal and off-load their cargoes.

9.1 Dredging Limits Alternatives

Weaver's Cove intent is to create a project where dredging limits satisfy the navigational requirements of the LNG shipping fleet and minimize dredged material volume, dredging footprint, and potential environmental impacts. Both the dredging depth and horizontal limits were set after evaluating the above factors. The methodology used to define the extent of the dredging limits is discussed in Sections 3.1 and 3.2. Maximizing the use of the existing Federal Navigation Channel has minimized the dredged material volume and the dredging footprint. As discussed previously, the MSI ship and harbor simulator was used by local harbor pilots to minimize the required dredge footprint in the limited instances where expansions to the existing Federal Channel footprint were required.

In summary, Weaver's Cove's Proposed Action has reduced the channel dimension requirements to those that mirror the navigational requirements and require the dredging contractor to operate with precision and accuracy, thereby reducing the in-situ sediment quantity and as such the time required to perform the dredging.

9.2 Dredging Methodology Alternatives

In principal there are two basic families of dredge equipment – mechanical and hydraulic dredges. A hydraulic dredge is a feasible alternative to the mechanical dredging defined in the Proposed Action in Section 7.1.

9.2.1 Hydraulic Dredging

Hydraulic dredging produces a dredged material that is a slurry of sediment and water. There are two principal types of hydraulic dredges that could be used for the Weaver's Cove Project: a hopper dredge or a cutter-suction dredge. Both remove the in-situ sediment through suction and transport it as a slurry.

A trailing-suction hopper dredge is self-propelled and discharges the slurry into an on-board hopper and the entire dredge is transported to the disposal site; where the slurry can either be bottom dumped into an aquatic disposal site, pumped out to a CDF, or sidecast directly into the receiving waters. A hopper dredge is effective for dredging navigational channels and soft or unconsolidated sediments and essentially functions like a giant underwater vacuum cleaner. Typically, a hopper dredge is not used for removal of consolidated sediments associated with improvement dredging operations.

Table 5
Dredging and Disposal Alternatives Summary

Alternative	Dredging	Processing	Placement	Considerations
No Action	***Does not apply as dredging & disposal is requirement for proposed LNG facility***			
Proposed Action	Mechanical	Mixing Mill for stabilization	Upland Reuse	Consistent production rates.
	Mechanical	Spread and Till for stabilization	Upland Reuse	Weather impacts (cold, rain), and limited available land constrain volume stabilized in time.
	Mechanical	In-barge Mixing for stabilization	Upland Reuse	Adequate mixing.
1	Mechanical	None	Offshore	Additional sampling and analysis required to support permit application. Tier III evaluation pending.
2	Hydraulic	Naturally dewater through settling and consolidation	Upland disposal	Upland disposal site capable of storing dredged material during dewatering period not secured. LNG Terminal construction requires specific subsurface properties.
3	Same as Proposed Action		Upland Reuse but not at LNG Terminal	Additional upland reuse sites with sufficient storage capacity not yet identified.
4	Mechanical	Untreated	Truck to Landfill	Dredged material quantity exceeds regional landfill available capacity. High cost.
5	Mechanical	Untreated	Confined Aquatic Disposal facility (CAD)	Dredged material volume more than doubles to create CAD cell and this overburden requires disposal. Twice the suspended sediment plumes during disposal operation. Tier III evaluation pending.
6	Mechanical	Untreated	Island Creation	Feasible location not identified due to conflict between bird and fish impacts. Tier III evaluation pending.
7	Mechanical or Hydraulic	Untreated	Nearshore Confined Disposal Facility (CDF)	Wetland and open water filling issues, Tier III evaluation pending.

9.4.1 D&D Alternative 1 – Mechanical dredging with offshore disposal

This alternative is a variation on the Proposed Action where all of the dredged material would be mechanically dredged and disposed at existing offshore disposal sites. Bottom dumping scows would be used to transport the dredged material using tugs to haul the scow from the dredge site to the disposal site. At the disposal site, the dredged material would be released into the water column where it would settle to the ocean floor.

The ability to realize this alternative is highly dependent upon a pending Tier III Evaluation following the USACE/USEPA Evaluation of Dredged Material for Ocean Disposal published in 1991.

Dredge Prog Progress

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Weaver's Cove Energy, LLC
Mill River Pipeline, LLC
Docket Nos. CP04-36-000 and CP04-41-000
OEP/DG2E/Gas 1
Section 375.308(x)February 5, 2004

Commission Request Resource Report 1, No. 3:

Based on estimated dredging/dredge reuse production rates, provide a figure showing or a table listing each dredging area and the approximate dates and duration of the dredging in each of these areas.

Response:

Estimating and defining the duration and schedule of the physical dredging by defined location or dredging element at this point would be difficult, particularly with upland reuse, due to uncertainties in balancing the three integral production rates - dredging, - dredged material stabilization and upland reuse/stabilized dredged material placement. Weaver's Cove Energy is proposing beneficial reuse of dredged material through stabilization and reuse as engineered fill. This beneficial reuse plan requires additional capital commitment over other disposal methods (confined upland disposal, confined aquatic disposal, offshore disposal, etc.) extends the dredging and placement calendars, and requires substantial construction coordination with multiple and distinct ongoing site development activities at the LNG Terminal. To implement its beneficial reuse plan, Weaver's Cove Energy requires flexibility to sequence the dredging, dredged material stabilization, and upland reuse to achieve optimal production rates in real-time during the construction activity.

Sections 2 and 7.3 of the Dredging Program (Attachment 1 to the Environmental Report provided as Exh. F-1 to the Application) discuss the rationale, justification, and support for this process, detailing the range of variables affecting the dredging, stabilization, and upland reuse production rates. As identified in Section 7.3 of the Dredging Program, Weaver's Cove Energy plans to optimize equivalent production rates between the dredging, dredged material stabilization, and upland reuse/stabilized dredged material placement production rates. Additionally, Section 7.3 of the Dredging Program presents an efficient dredging – stabilization – upland reuse sequencing example by dredging element and LNG Terminal area.

Section 8.2 of the Dredging Program summarizes the seasonal operational restrictions proposed by Weaver's Cove Energy to achieve the proposed dredging while minimizing environmental impacts to sensitive aquatic receptors. Performing the dredging in accordance with Weaver's Cove Energy's proposed operational restrictions facilitates year-round dredging within each and every Dredging Element in order to maintain the ability for continuous dredging, dredged material stabilization, and upland reuse and to facilitate the land-side terminal construction and the dredging/upland reuse having a

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"finish-finish" schedule relationship.

Prepared by or under the direction of: George F. Gehrig
Position: President and Chief Operating Officer, Weaver's Cove Energy, LLC
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Attachment 6

A visual analysis was conducted by Sasaki Associates, Inc. from areas with possible views of the LNG terminal site during leaf on and leaf off periods based on topography, surrounding buildings, and forested areas. The results of this study are shown on photographs provided in appendix G. The most prominent views of the facilities would be from the back of the Border City Mill Complex Apartments and the Somerset side of the river. Although there are some existing visual distractions in the area (*e.g.*, transmission lines, transmission towers, and buildings), the LNG tank associated with the terminal site would dominate the viewshed for these areas and would result in both temporary and permanent changes to the surrounding visual landscape.

Because of the limited potential for screening, the visual impacts associated with the LNG terminal would be unavoidable; however, Weaver's Cove Energy would use the dredged material to construct a landform (with a maximum elevation of about 100 feet above MSL) north and east of the tank to provide some visual screening of the facility from locations to the east and northeast. The LNG storage tank would rise over 100 feet above the top of this landform. Weaver's Cove Energy would also implement a landscape design that would include plantings that are native to the area. In addition, because Weaver's Cove Energy would be cleaning up and removing the existing facilities on the site, some beneficial impacts on the viewshed could occur.

Exterior lighting at the LNG terminal site would be installed as necessary for general plant operations, worker and visitor safety, and security. Floodlighting would be installed for critical process areas and the unloading facility. Lower intensity lighting would be installed along internal roads, at general plant areas, and at the perimeter fencing. The tank would be equipped with security and worker lighting on work platforms on the top of the tank, as well as the stairs leading to the dome. Lighting at the LNG terminal site would be in accordance with OSHA requirements, other applicable codes, and proper security practices. Weaver's Cove Energy would downcast the lighting at the internal roads and perimeter fence to minimize offsite light scatter.

In its *Notice of Proposed Construction or Alteration* submitted to the Federal Aviation Administration (FAA), Weaver's Cove Energy requested that the proposed LNG storage tank not be required to display marking or lighting designed to meet FAA standards. The FAA's Advisory Circular 70-7460-1K, Chapter 1, Subsection 5(b)(2) indicates that no marking and/or lighting is considered necessary or required in instances where "the object may be so located with respect to other objects or terrain; removed from the general flow of air traffic; or may be so conspicuous by its shape, size, or color that marking or lighting would serve no useful purpose." As previously discussed, the proposed 195-foot-tall LNG storage tank would be located in an area with existing electrical transmission towers that are about 300 feet tall and stacks at the Montaup Power Plant that are between 280 and 310 feet tall. There is also a steep bluff to the east of the site with several buildings in excess of four stories in height located at the top of the bluff. The closest operating airport to the LNG storage tank is the New Bedford regional airport, which is located more than 10 miles northwest of the site. In addition, because of its size, the tank would be clearly visible during daylight hours and the security and worker lighting on the top of the tank would be lit between sunrise and sunset. Although this lighting would not be designed to meet FAA standards (*e.g.*, it would not flash or strobe), it would make the tank visible at night. As a result, marking or lighting the tank in accordance with FAA standards would not enhance its visibility and would not serve a useful purpose as indicated by Advisory Circular 70-7460-1K.

4.8.7.2 Pipeline Facilities

The pipelines facilities would be located on private lands that are not subject to Federal or state visual management standards. Visual resources along the pipeline route are a function of geology, climate, and historical processes and include topographic relief, vegetation, water, wildlife, land use, and

Chemical Analyses

The results of the chemical characterization of the proposed dredged sediments are based on a statistical analysis of the 55 individual core strata analyzed by Weaver's Cove Energy. The statistical evaluation provides a more representative composite of the chemical characteristics of the sediment than physical compositing of cores prior to laboratory testing. The average chemical results of all samples are discussed below because the dredged material would be effectively composited during the stabilization and upland reuse process proposed by Weaver's Cove Energy.

Statistical averages were compared to a number of commonly accepted, ecologically risk-based screening criteria to assess the potential hazards posed to the aquatic environment by the dredged sediment. Marine sediment values presented in the NOAA Screening Quick Reference Tables (Buchman, 1999) were used in assessing the COE-requested compounds. The following three NOAA screening criteria were used for comparisons:

- Effects Range-Low (ER-L) - a criterion representing the lower 10^{th} percentile sediment concentration at which effects may begin to be observed in sensitive species and rarely result in adverse biological impacts;
- Effects Range-Median (ER-M) - a criterion representing the median (50^{th} percentile) sediment concentration, above which effects frequently occur; and
- Probable Effects Level (PEL) - a criterion representing concentrations above which adverse biological effects are frequently expected.

In select instances, when no values for the above three criteria were available, the statistical results were compared to the Apparent Effects Threshold (AET). This criterion represents a screening concentration at which adverse biological effects would be expected based on test organisms exposed under laboratory conditions.

PAHs

Sediment samples were analyzed for 16 distinct PAHs. The frequency of detection for all PAHs in all samples ranged from 42 to 80 percent.

Of the 16 PAHs analyzed, 12 have listed ER-L, ER-M, and PEL screening values. The average concentration of each of these 12 PAHs was below the ER-M and PEL values. The average concentrations of four of the 12 PAHs (fluoranthene, chrysene, benzo(a)pyrene, and dibenz(a,h)anthrane) were below the ER-L screening criteria. The average concentration of eight of the 12 PAHs (naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene, pyrene, benzo(a)anthracene) was greater than the most conservative ER-L value. Four PAHs (benzo(b)fluoranthene, benzo(k)fluoranthene, indeno(1,2,3-cd)pyrene, benzo(g,h,i)perylene) had no listed ER-L, ER-M, or PEL screening values. For these four compounds, the alternate AET screening criteria were applied. The average concentrations of these four PAHs were well below the AET values.

In all areas with average PAH concentrations above the ER-L criteria, the PAHs were found only in the upper strata of sediment, except at core location TB-10. In this core, which is located in the turning basin near the existing pier at the LNG terminal site, average PAH concentrations above the ER-L criteria were found in both the upper and lower levels of sediment.

Although the majority of PAHs occurred throughout much of the proposed dredging area at concentrations above the most conservative risk-based screening criteria (ER-L), average PAH concentrations were below the ER-M and PEL screening criteria, and well below the AET criteria. The

distribution of some PAHs was relatively uniform throughout much of the dredging area; however, the concentrations of most PAHs were higher in the area between the Braga Bridge and the north end of the turning basin.

PCBs

PCBs are a general class of compounds with a variety of chemical compositions. Sediment samples were analyzed for a total of 22 distinct PCBs. Total PCB concentrations were estimated by summing the concentration of 18 of the specific compounds analyzed and multiplying by two. This method was identified in both the COE's approval of the sediment sampling and analysis program and the COE/EPA draft Regional Implementation Manual (EPA-COE, 2002). For those samples with individual PCB concentrations below detection limits, one-half of the value of the specific PCB's detection limit was used to generate the total PCB estimate.

For all samples, the frequency of detection for individual PCB compounds ranged from 0 to 31 percent, with an average frequency of detection of 8 percent. The average concentration of individual PCBs ranged from 0.70 to 3.71 parts per billion (ppb). Nine of the 22 specific PCBs analyzed were not detected in any individual sediment sample.

The average total PCB concentration exceeds the ER-L screening value, but does not exceed either the ER-M or PEL screening values. The vertical and horizontal distribution of samples with average PCB concentrations exceeding the ER-L screening level was relatively evenly spread throughout the proposed dredging area. However, the area between the Braga Bridge and the south end of the turning basin exhibited the highest average total PCB concentrations.

Pesticides

Sediment samples were analyzed for a total of 21 pesticides. Only DDE was detected, in about 5 percent of the samples.

For several of the 20 pesticides that were not detected, the ER-L and ER-M screening values are less than the analytical detection limits. As a result, these compounds artificially appear to exceed the screening values. A data interpretation procedure commonly accepted under these circumstances is to compare the average concentration in the sediment to the analytical method detection limit because laboratory-based toxicological research can, and often does, achieve greater accuracy than can be achieved using standard methods for the analysis of environmental media. Because these 20 pesticides were undetected across the sample set, the apparent screening criteria exceedances were disregarded and these 20 pesticides were not considered contaminants of concern (COCs).

The one pesticide that was detected, DDE, had an average concentration in the bulk sediment that was below the detection limit and below the ER-M and PEL thresholds. The ER-L value for DDE was less than the analytical method detection limit.

Metals

Sediment samples were analyzed for eight metals, including arsenic cadmium, chromium, copper, lead, mercury, nickel, and zinc. Individual metals were detected in 82 to 100 percent of the samples. The average concentrations of seven metals exceeded the most conservative ER-L screening values; cadmium was the only metal with an average concentration below the ER-L screening criterion. Seven of the metals had average concentrations below both the ER-M and PEL thresholds. However, average mercury concentrations exceeded the ER-M and PEL values. The concentrations of metals in samples from the turning basin and the Federal channel south of the Braga Bridge were relatively similar. The highest concentrations of metals occurred between the Braga Bridge and the south end of the turning basin.

Massachusetts Contingency Plan Constituents

In addition to the constituents requested for analysis by the COE, the DEP requested the analysis of three parameters: VOCs, EPH, and TCLP. These testing procedures are often used by the DEP in the management of contamination in upland environments under the Massachusetts Contingency Plan (MCP) which is regulated under Massachusetts General Law Chapter 21E.

Weaver's Cove Energy collected fourteen sediment subsamples from the core sites identified for the COE-approved sediment sampling and analysis program and analyzed for the requested MCP parameters. The core locations and samples were identified by Weaver's Cove Energy's Licensed Site Professional (LSP) prior to the field sampling effort and represent a subset of the sediments analyzed using the COE protocols.

The MCP established a series of risk-based action levels based on site use and other factors. The analytical results for each MCP parameter were compared to the corresponding MCP Method 1 S2/GW2, S2/GW3 and S3/GW2, S3/GW3 concentrations for the Shell oil facility where sediment placement is being proposed. The MCP Method 1 concentrations are risk-based criteria developed based on a multi-faceted combination of expected soil exposure, indoor air quality, and the protection of surface water quality. Groundwater at the site is not classified as drinking water (GW1) and thus only volatilization to structures (GW2) and groundwater discharge to surface water (GW3) were the receptors of concern.

Toxicity Characteristic Leaching Procedure

According to 314 CMR 9.07 (2)(b)6, the "TCLP analysis is to be performed when sediment is to be managed in the upland and if the total concentrations of metals or organic compounds are equal to or greater than the theoretical concentration at which TCLP criteria may be exceeded as follows:

- > 100 mg/kg arsenic
- > 20 mg/kg cadmium
- > 100 mg/kg chromium
- > 4 mg/kg mercury"

The total concentrations of TCLP-metals in the 14 MCP samples did not exceed the screening criteria listed above. However, some of the cores collected for COE-requested analyses contained metal concentrations that slightly exceeded the TCLP screening criteria. As a result, Weaver's Cove Energy performed TCLP analyses on all 14 MCP samples. The analytical results indicated that leached constituent concentrations were below appropriate thresholds. Therefore, the leaching of measurable concentrations of TCLP-specific compounds from the stabilized dredged sediment into the groundwater below the LNG terminal site would not occur in excess of TCLP thresholds. In addition, Weaver's Cove Energy would undertake TCLP analyses of stabilized dredged material samples as part of the field testing program it has proposed to support the dredging effort (C2D, 2003).

Extractable Petroleum Hydrocarbons

Sediment samples were analyzed for EPHs. The EPHs were separated into C9-C18 aliphatics, C19-C36 aliphatics, C11-C22 aromatics, and unadjusted C11-C22 aromatics. Detection frequencies for these four groups of compounds ranged from 21 percent to 57 percent. The average concentration, 95 percent Upper Confidence Limits (UCL), and maximum values for C9-C18 aliphatics, C19-C36 aliphatics, and C11-C22 aromatics were all significantly below the appropriate S2/GW2, S2/GW3 and S3/GW2, S3/GW3 thresholds by a factor of 10 or more. No MCP criteria exist for the unadjusted C11-C22 aromatics; however, based on the MCP criteria for the other three groups of EPHs, the concentration of unadjusted C11-C22 aromatics appears to be acceptable for upland disposal.

Volatile Organic Compounds

Sediment samples were analyzed for 68 individual VOCs. Of these, 63 were not detected in any sample. Of the five remaining VOCs, three are suspected as laboratory contaminants (bromomethane, acetone, and 2-butanone (methylethylketone)) because they are common laboratory chemicals and were detected at relatively equivalent concentrations in the associated method blanks. The two remaining VOCs detected (carbon disulfide and tetrahydrofuran) had a frequency of detection of 14 and 86 percent, respectively. The average concentrations, 95 percent UCL, and maximum values of these VOCs were significantly below the most conservative MCP reporting criteria.

East Channel Sediments

The East Channel has a federally authorized depth of 30 feet below MLLW, and runs alongside the main Federal navigation channel. A wedge-shaped portion of this channel falls within Weaver's Cove Energy's proposed dredging area (see figure 4.2.2-2). The proposed action would deepen this portion of the East Channel to about 37 feet below MLLW.

Weaver's Cove Energy's sediment sampling and analysis program did not include the collection of sediment samples within the East Channel. When the program was developed, Weaver's Cove Energy did not know that a portion of the East Channel would require dredging to support the navigational requirements of the project. However, in the sediment sampling program carried out by the OCZM, four sediment cores were collected from within this wedge, specifically cores EC-4, -5, -6, and -7 (see figure 4.2.2-2). Due to OCZM's sample compositing scheme, these four cores yielded two sediment samples: EC-A (composited from cores EC-1, EC-3, and EC-5) and EC-B (composited from cores EC-6 and EC-7). Based on a hydrographic survey conducted in 2000, the sampling depth of EC-A was estimated to be 36.1 feet below MLLW (based on core EC-4) and the sampling depth of EC-B was estimated to be 34.5 feet below MLLW (based on core EC-7).

To determine whether the OCZM's analytical results for the East Channel sediments were within Weaver's Cove Energy's observed ranges, the data from EC-A and EC-B were compared with the average and maximum concentrations obtained from Weaver's Cove Energy's sediment sampling program. Based on this comparison, the East Channel sediments were determined to be physically similar to the sediments in the main navigation channel. Although it does not appear that OCZM's chemical analysis of cores from the East Channel was as extensive as Weaver's Cove Energy's sediment analysis, the two data sets share a number of COE-requested analyses that can be compared. Both studies analyzed the same eight metals. OCZM also analyzed 15 of the PAHs and 14 of the pesticides analyzed by Weaver's Cove Energy.

Because noise impacts are most significant when existing background noise is lowest, the lowest noise levels measured for each location were used to assess the ambient noise impact of the project. The lowest L_{dn} calculated for the three 24-hour periods (midnight to midnight) at each continuous noise monitor was used to estimate the L_{dn} for other NSAs.[13] Based on noise data and the types of noise sources surrounding the various NSAs, the L_{dn} measured at NSA 1 was used as the existing L_{dn} for NSAs 6, and 7, the L_{dn} measured at NSA 2 was used as the existing L_{dn} for NSAs 5 and 8, and the L_{dn} measured at NSA 3 was used as the existing L_{dn} for NSA 4. The L_{90} calculated from the short-term noise measurements for NSA 1, NSA 2, and NSA 3 were compared to the L_{90} calculated for the continuous (long-term) noise measurements at these locations to validate the use of the short-term measurements for demonstrating compliance with the DEP noise regulation. The short-term noise measurements compared well with the continuous noise measurements; therefore, the short-term noise measurements were included in determining the representative L_{90} for each NSA. The L_{90} and L_{dn} values established by the noise study are summarized in table 4.11.2-2.

TABLE 4.11.2-2

Existing Noise Levels at the Closest Noise Sensitive Areas

Location	L_{90}	L_{day}	L_{night}	L_{dn}
NSA 1	43	54.9	51.1	58.3
NSA 2	41	60.3	56.9	64.0
NSA 3	47	53.6	51.7	58.4
NSA 4	39	53.6	51.7	58.4
NSA 5	42	60.3	56.9	64.0
NSA 6	43	54.9	51.1	58.3
NSA 7	39	54.9	51.1	58.3
NSA 8	51 a/	60.3	56.9	64.0

a/ L_{90} at NSA 8 (Wiley Elementary School) is based on the lowest daytime noise measurement at NSA 2

L_{eq} 24-hour equivalent sound level
L_{day} daytime sound level
L_{night} nighttime sound level
L_{dn} day-night sound level

Noise Impacts and Mitigation

Construction of the LNG facilities would occur over a 3-year period. Construction of the LNG terminal, dredging, and dredged material reuse would take place during the entire construction period. The construction of the ship unloading facility would take approximately 12 months and would occur in the middle of the project schedule. Construction of the pipelines, including the Taunton River crossing, would take approximately 10 months at the end of the construction period. The noise associated with these construction activities would be intermittent, as equipment would be operated on an as-needed basis. Construction activities at the LNG terminal and also along the pipeline routes would generate short-term increases in sound levels predominately during daylight hours, when the most significant construction activities would occur. The most prevalent sound source would be the internal combustion engines on the construction equipment. Some of the equipment would be electric powered, reducing the total noise from construction equipment. The maximum noise levels from the impact pile-driving at the nearest residence (1,250 feet away) would be approximately 76 dBA at the higher force. Pile-driving

[13] Weaver's Cove Energy estimated the L_{dn} for the five NSAs where 24-hour monitoring was not conducted by comparing the short-term monitoring data collected at these sites to the long-term continuous monitoring data that was collected for NSAs 1, 2, and 3. Weaver's Cove Energy then selected the noise level at NSAs 1,2, or 3 that was most representative of the short-term monitoring result collected at the five NSAs.

activities would be restricted to daytime hours to prevent nighttime noise impacts. The estimated noise levels generated by other construction equipment are provided in table 4.11.2-3.

TABLE 4.11.2-3

Noise Levels from Various Construction Equipment/Activities

Equipment/Activity	Noise Level (dBA) at 50 feet
Backhoe a/	82
Mobile Crane a/	81
Truck a/	80
Generator a/	79
Clamshell dredge b/	67 @ 250 feet
Tugs b/	82

a/ Noise level data are based on BBN, 1977

b/ Noise levels based noise estimates from the May 1998 Final Environmental Impact Statement/Environmental Impact Report and Final Feasibility Study prepared by the Port of Oakland and the U.S. Army Corps of Engineers for the Oakland Harbor Navigation Improvement (50-foot) Project

dBA decibels of the A-weighted scale

Dredging and dredge stabilization would occur up to 24 hours per day for the entire 3-year construction period. Dredging would include the use of tugs and excavators while dredged material offloading and stabilization would include conveyors, a pug mill, and two hydraulic excavators. The estimated noise impact from the dredged material offloading and stabilization would be 67 dBA at the nearest residence in Fall River (875 feet away) and 59 dBA at the nearest residence in Somerset (2,250 feet away). These noise estimates do not include any reductions from the earthen berm that would be constructed during the construction period. This berm would be expected to provide a minimum noise reduction of about 10 dBA. The dredging equipment would be moving periodically; however, the most significant period of time at any one general location would be in the turning basin. The dredging equipment operating in the turning basin would be located as close as 650 feet from residences in Somerset and 1,300 feet from residences in Fall River. Using the noise levels in table 4.11.2-3, we performed an analysis to estimate the maximum noise impact from dredging operations (assuming one dredge and one tug). Based on this analysis, we estimate the maximum noise level attributable to the dredging equipment would be 62.3 dBA at the nearest residence in Somerset and 56.2 dBA at the nearest residence in Fall River. Therefore, the dredging and dredged material stabilization activities would potentially exceed 55 dBA L_{dn} at the nearest NSA. Because the dredging and dredged material stabilization activities would potentially occur 24 hours per day for approximately 3 years, we **recommend that:**

- **Weaver's Cove Energy prepare a noise mitigation plan to ensure that the dredging, offloading, and stabilization operations do not contribute more than 55 dBA L_{dn} to the ambient noise level at any noise sensitive area and file the plan with the Secretary prior to construction.**

Construction of the proposed pipelines would require operating construction equipment close to residential areas. These pipeline construction activities would occur during daylight hours, six days per week. Pipeline construction is like having an assembly line, with crews conducting separate but sequential activities, each generally proceeding at rates ranging from several hundred feet to a mile per day. Depending on the distance between each crew in the assembly line, construction activities in any one area could last from several weeks to several months on an intermittent basis. On some portions of the pipeline routes, the stovepipe technique would be used to install the pipelines (see section 2.4.2.2). This technique would result in more intense construction activities for a shorter period in select areas.

overflow), and/or dredging schedules (avoid spawning periods). The revised dredging program and pipeline construction schedule should be filed with the Secretary for review and approval by the Director of OEP prior to construction.

If Federal and state agencies require timing restrictions to avoid the winter flounder spawning period and/or other sensitive fish periods or limit the type of dredging equipment, the proposed 3-year construction schedule for the project could be affected. Any restrictions that reduce the amount of dredging days or the rate of dredging could potentially prolong the construction schedule beyond 3 years. For example, if Weaver's Cove Energy is prohibited from dredging during the winter flounder spawning period (January 1 to April 30), dredging operations could be conducted only 8 months per year. Over the proposed construction period, this restriction could delay completion of the project up to 1 year. Prolonging the construction schedule could have financial impacts on Weaver's Cove Energy as well as additional environmental impacts such as noise, air emission, traffic, and visual impacts related to the construction activities.

LNG Terminal Construction and Operation

As discussed in section 4.3, stormwater runoff from the construction site and placement of fill into the Taunton River could increase suspended sediment and turbidity levels near the site. Disturbance near the water's edge by construction equipment and the resulting temporary increase in turbidity could lower fish usage in the immediate vicinity of the site. However, the shoreline along the proposed site has been previously disturbed and man-made shoreline is abundant along the river near the site. Thus, fish affected by construction would likely utilize similar habitats upstream and downstream of the proposed site.

The removal of the existing pier structure and replacement by a new ship unloading facility could also result in increased turbidity in the water column and temporarily reduce fish usage of the area. Additionally, piles driven into the riverbed to support the new ship unloading facility would permanently affect about 800 square feet of benthic habitat. However, piers and other structures are present upstream and downstream of the proposed site and fish disturbed by construction activities at the site would likely use the nearby structures for habitat. Also, although there would be a temporary loss of structural habitat during the period between removal of the existing structure and completion of the new unloading facility; the habitat lost from removal of the existing pier would likely be replaced and perhaps supplemented with development of the new facility. Fish using the benthic habitat in the area would likely relocate to similar nearby areas and fish requiring structural habitats may become more abundant following construction of the new unloading facility.

Other potential effects of the proposed project on aquatic organisms during construction and operation of the proposed LNG terminal could include entrainment or impingement of fish during water withdrawals, mortality from toxic substances (*e.g.*, fuel spills), increased turbidity and the resuspension of sediments during LNG vessel movements, and the introduction of invasive species by LNG ships.

Weaver's Cove Energy has indicated that it may use up to about 33 million gallons of water from the Taunton River to hydrostatically test the LNG storage tank and pipelines. The withdrawal of river water for hydrostatic testing would not likely entrain adult fish since the water intakes would be screened as required by the FERC Procedures. The screens, however, would not necessarily prevent the entrainment and/or impingement of larvae and eggs, particularly if the withdrawal hose is positioned in the water column where a preponderance of larvae or eggs are present (*e.g.*, at the bottom of the waterbody when demersal eggs are present). However, hydrostatic test water withdrawals would be conducted in accordance with the FERC Procedures and applicable state permits, which would minimize potential impacts on aquatic resources within the Taunton River. The entrainment or impingement of

4.13 CUMULATIVE IMPACTS

Cumulative impact results when impacts associated with a proposed project are superimposed on, or added to, impacts associated with past, present, or reasonably foreseeable future projects within the area affected by the proposed project. Although the individual impacts of the separate projects may be minor, the effects from the projects taken together could be significant.

Existing environmental conditions in the project area have been influenced by human industry, activities, and development, which have permanently altered the natural ecosystems within the Narragansett Bay watershed. This is particularly true in and around the public ports within the bay including those at Providence, Quonset Point-Davisville, and Fall River.

Table 4.13-1 provides a list of other past, present, or reasonably foreseeable future projects or activities that have impacted or may cumulatively impact resources that would be affected by construction and operation of the Weaver's Cove LNG Project. The general locations of many of these projects/activities are shown on figure 4.13-1. These projects and activities include primarily those located in the vicinity of the proposed project. More distant projects are not assessed because these projects generally do not have regional effects and, therefore, do not contribute significantly to cumulative impacts in the proposed project area. Potential impacts associated with these projects that are most likely to be cumulatively significant are related to aquatic resources, upland or wetland vegetation, infrastructure and public services, vehicular traffic, ship traffic, land use, air quality/noise, and natural gas infrastructure. Cumulative impacts that could be most directly associated with the Weaver's Cove LNG Project are discussed below.

Aquatic Resources

The Mount Hope Bay and the Taunton River aquatic ecosystem is made up of a variety of habitats including open water, salt marshes, seagrass beds, cobble bottoms, oyster beds, soft bottoms, tidal flats, beaches, and rocky shores. The fish community within the area is estuarine with coastal migrant fishes that include striped bass, bluefish, tautog, winter flounder, summer flounder/fluke, scup, and weakfish. Additionally, this system provides habitats to various benthic organisms (both epifauna and infauna) including clams, quahogs, crabs, lobsters, snails, shrimps, sponges, barnacles, amphipods, and polychaete worms. These aquatic resources have been stressed due to overfishing, habitat alternation, and pollution (EPA, 2002a).

Overfishing is believed to have contributed to the declines that have been observed in many of the fish stocks in Mount Hope Bay. Currently, there are strict commercial and recreational fishing limits to help restore fish stocks. These restrictions have closed Mount Hope Bay to commercial trawlers and closed recreational fishing for winter flounder in the bay for 10 months of the year.

Dredging of ship channels and berths as well as coastal developments (*e.g.,* piers, marinas, waterfront structures) have altered habitats within Mount Hope Bay. For example, eelgrass beds that once occurred extensively throughout the region have been nearly eliminated from Mount Hope Bay. Additionally, water temperatures in Narragansett and Mount Hope Bays have increased markedly over the past 40 years. Likely causes include global warming and the discharge of waste heat into the bay from local power plants. This warming has resulted in a loss of the usual winter-spring diatom bloom, with potential impacts on higher trophic levels because of changes in prey availability. Warmer water in winter may also increase predation rates by shrimp on larval winter flounder, contributing to recent population declines (Keller and Klein-MacPhee, 2000).

TABLE 4.13-1

Past, Present, and Future Projects That Could Cumulatively Impact Resources of Concern Near the Weaver's Cove LNG Project

Activity/Project	Description	Primary Environmental Impact							
		Aquatic Resources	Vegetation	Public Services	Vehicular Traffic	Ship Traffic	Land Use	Air Quality/Noise	Gas Infrastructure
Past and Present Activities/Projects									
Residential/Commercial Developments	Various developments in Fall River, Swansea, and Somerset.	✓	✓	✓	✓	✓	✓	✓	
Commercial/Recreational Fishing	Historically, commercial and recreational fishing did occur in Mount Hope Bay and the Taunton River. Because of the current status of fish populations, commercial fishing has been essentially eliminated and recreational fishing for many species has been severely curtailed.	✓				✓			
Regional Stormwater and Sewer Systems	Currently, the 19 Combined Sewer Overflow (CSO) Outfalls of the Fall River system discharge approximately 1.3-billion gallons of rainwater and sewage to the Mount Hope Bay each year.	✓							
Brayton Point Power Plant	Fossil fuel burning, electricity generating plant located on the Lee and Taunton Rivers in Somerset.	✓	✓			✓	✓	✓	
Borden and Remington Corporation	Chemical distribution facility in Fall River. Docking facilities along the Taunton River - bulk storage of chemicals.	✓	✓			✓	✓	✓	
Montaup Power Plant	Fossil fuel burning, electricity generating plant located in Somerset.	✓	✓			✓	✓	✓	
Braga Bridge Rehabilitation	Work includes repairs to the bridge structure and concrete deck, and resurfacing the pavement. Currently scheduled for 2003-2004 construction seasons.			✓	✓				

TABLE 4.13-1 (cont'd)

Past, Present, and Future Projects That Could Cumulatively Impact Resources of Concern Near the Weaver's Cove LNG Project

Activity/Project	Description	Primary Environmental Impact							
		Aquatic Resources	Vegetation	Public Services	Vehicular Traffic	Ship Traffic	Land Use	Air Quality/Noise	Gas Infrastructure
Fall River State Pier	Upgrading and expansion of the existing Fall River State Pier.	✓		✓	✓	✓	✓	✓	
Aquaria Project	Desalination plant on the Taunton River in Dighton, Massachusetts. Project includes construction of 16-mile-long water pipeline. Scheduled to be in-service in 2005.	✓	✓	✓			✓		
Fall River CSO Abatement Project	Construction of a three-mile long, 20-foot diameter CSO tunnel to eliminate storm-related discharges. Located in the city's south end.	✓		✓	✓				
Brightman Street Bridge Replacement (Route 6)	Construction of a new, higher bridge and reposition Route 6 in Somerset and demolition of the old bridge. Scheduled to be completed by 2008..	✓		✓	✓	✓			
Resurfacing Route 138	Includes South Main Street, Broadway Extension, North Davol and South Davol Streets.			✓	✓				
Shaw's Boat Yard, Inc.	Retain unauthorized structures and install and maintain new structures in the Taunton River at Dighton, MA..	✓				✓			
Bay State Gas Company	Excavate coal gasification-related materials from areas of the Taunton River, dispose of them and restore the sites. Located within the Weir Village section of Taunton, MA.	✓				✓			
Future Activity/Project									
Route 79 Relocation and Harbor Enhancement	Bring Route 79 down to grade and combine it with Davol Street to create a pedestrian-friendly boulevard as part of Fall River's waterfront plan.			✓	✓		✓		

TABLE 4.13-1 (cont'd)

Past, Present, and Future Projects That Could Cumulatively Impact Resources of Concern Near the Weaver's Cove LNG Project

Activity/Project	Description	Primary Environmental Impact							
		Aquatic Resources	Vegetation	Public Services	Vehicular Traffic	Ship Traffic	Land Use	Air Quality/Noise	Gas Infrastructure
Boardwalk in Somerset along the Taunton (recreation)	Construct a commercial boatyard for various marine related activities.	✓		✓		✓	✓		
Reconstruct North Main Street in Fall River	Construction will include North Main Street from the intersection of Herman Street going north to Freetown. Expected to begin in 2004.			✓	✓				
Quequechan Bike Path/Boardwalk	Extend the Heritage State Park boardwalk along the city's waterfront to Bicentennial Park and provide a link to Britland Park. It will traverse along Watuppa Pond, and the Quequechan and Taunton Rivers.			✓	✓		✓		
Commuter Rail	Extend existing Stoughton Line service from Boston to New Bedford and Fall River. Includes construction of track, bridges, grade crossings, intersection improvements, eight new commuter rail stations and two train layover facilities. Project currently on hold.	✓	✓	✓	✓		✓	✓	
City Pier Cleanup	City of Fall River is applying for EPA Brownfields Cleanup Grant for 4.2-acre parcel located on Davol Street.	✓					✓	✓	
Hotel and Conference Facility	150- to 200-room hotel located along the waterfront at the city pier site.	✓		✓	✓		✓	✓	
Keyspan LNG	Modification of existing LNG peakshaving facility in Providence to allow for marine imports of LNG. Sendout pipeline providing natural gas to Algonquin's G-system.	✓	✓			✓	✓	✓	✓
Somerset LNG	Construction of a new LNG import terminal at Brayton Point in Somerset, MA. Sendout pipeline providing natural gas to Algonquin's G-system.	✓	✓	✓	✓	✓	✓	✓	✓

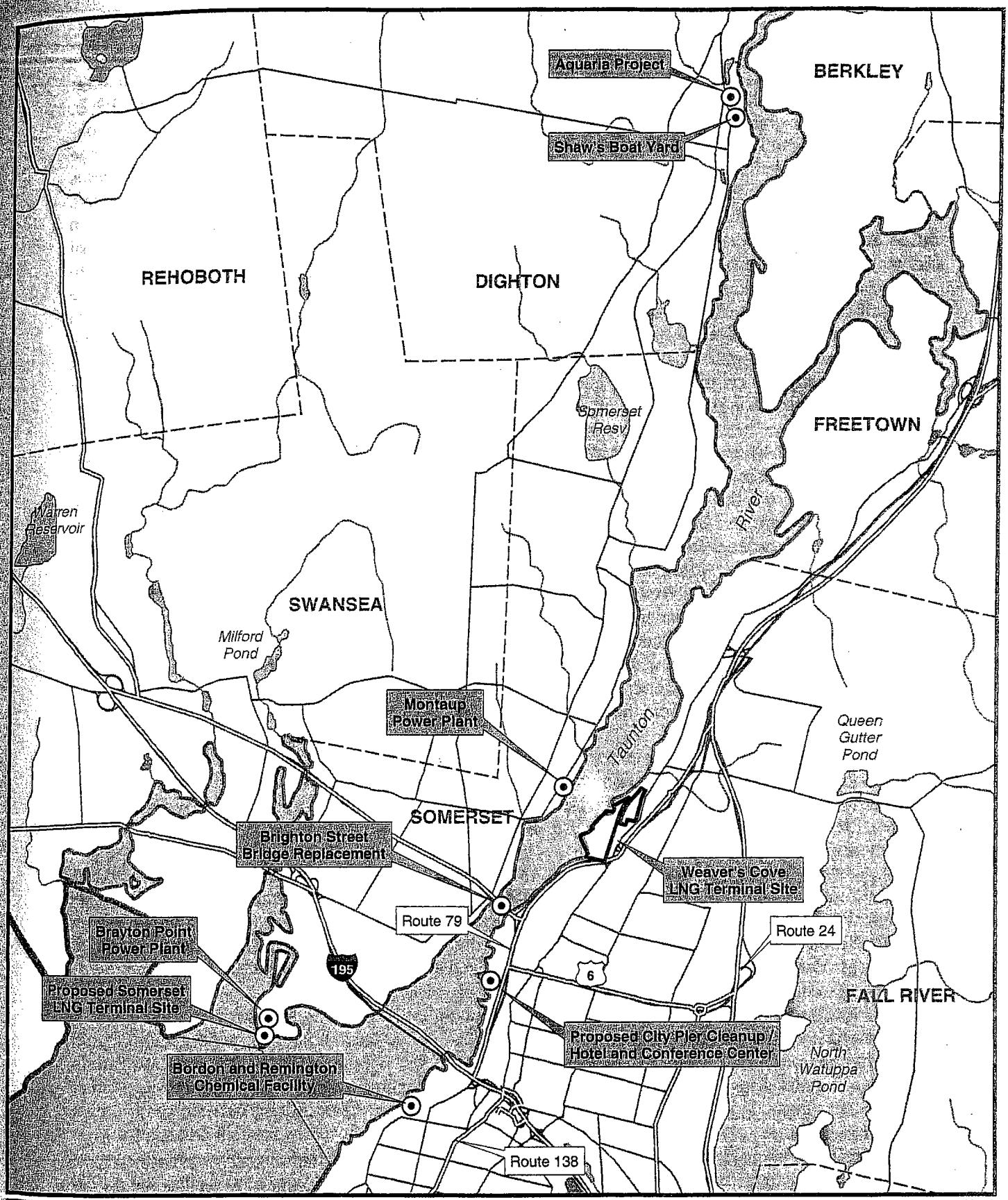

Figure 4.13-1
Weaver's Cove LNG Project
Select Past, Present, or Future Activities/Projects
Located Along the Taunton River

Current environmental conditions in Mount Hope Bay and the Taunton River do no meet designated water quality standards established in Massachusetts or Rhode Island (see section 4.3.2). These waterbodies have and are being degraded by both point and non-point sources of pollution. Non-point sources of pollution that affect water quality include stormwater runoff and wastewater discharge from residential, commercial, and industrial areas. Although the pretreatment of industrial wastewater is reducing the presence of industrial toxic pollutants from point sources, traces of metals and organic compounds are still found in area sediments (see section 4.2.2). Regardless of the source, the introduction of pollutants results in a variety of ecosystem impacts. The presences of some pollutants create potential human health risks primarily through the consumption of contaminated seafood. Nitrogen introduced into the Taunton River or Mount Hope Bay has resulted in excessive plant growth (algal blooms). When the algae die, they are decomposed by bacteria that consume dissolved oxygen, effectively suffocating fish and other organisms. Similarly, bacterial nitrification of ammonia discharged by wastewater treatment facilities can deplete waters of dissolved oxygen, making many areas uninhabitable (Caton, 2002). Fall River is presently working on a combined sewer outflow abatement program to improve water quality in Mount Hope Bay.

A specific source that has been singled out by regulators as contributing significantly to the degradation of the Mount Hope Bay ecosystem is the existing Brayton Point Power Plant. The power plant uses water from the river to condense the steam used to produce electricity. The heated water is then discharged back into Mount Hope Bay at a temperature of up to 95° F. Studies indicate that these discharges have resulted in a distinct thermal plume within Mount Hope Bay. Although contested by the power plant operator, this thermal plume and the impingement/entrainment of aquatic organisms during operation of the water intake system have been cited by regulators as major factors in the decline of fish stocks (particularly winter flounder) in the bay. A recent draft permit issued by the EPA for the Brayton Point Power Plant seeks to substantially reduce the facility's impact on aquatic resources of Mount Hope Bay through applying stronger controls on the withdrawal of water from the bay and the discharge of heated water to the bay (*i.e.*, reduction of the total annual heat discharge to the bay by 96 percent and the reduction of water withdrawn from the bay by 94 percent).

In the foreseeable future, there will likely be a number of projects or activities that result in additional stresses on the aquatic resources of the Taunton River and Mount Hope Bay. Non-point sources of pollution are predicted to continue to contribute significantly to water quality degradation (DEM, 2000). As listed in table 4.13-1, there are several waterfront projects in the region that could also degrade aquatic habitat in the project area.

Construction of the Weaver's Cove LNG Project would adversely affect surface water quality and biological resources associated with Mount Hope Bay and the Taunton River (see sections 4.3.2 and 4.6.2). Specific project activities such as dredging, dredge disposal, pipeline installation, and upland clearing/grading could result in a variety of impacts related to aquatic resources that include:

- increased water turbidity and resuspension of sediments;
- surface runoff/erosion;
- loss of wetland or upland vegetation;
- disturbance to benthic substrates (*e.g.*, quahog habitats); and
- potential spills of hazardous substances.

Potential construction impacts on aquatic resources would be minimized by Weaver's Cove Energy's compliance with our recommendations, the FERC's Plan and Procedures, as well as its onshore and offshore SPCC Plans. Nevertheless, the Weaver's Cove LNG Project could contribute to cumulative impacts on water quality and aquatic organisms when considered in relation to past, present, and reasonably foreseeable impacts on the Mount Hope Bay and the Taunton River. Impacts from dredging

could be compounded if other significant dredging projects were conducted concurrently (*e.g.*, Somerset LNG Project).

The entrainment and impingement of fish (eggs, larvae, juveniles, and/or adults) during construction and operation of the Weaver's Cove LNG Project could also contribute to the cumulative impact on biological resources in Mount Hope Bay and the Taunton River. As discussed in section 4.6.2, the Weaver's Cove LNG Project could involve a one time appropriation of between 32 and 33 million gallons of water from the Taunton River to hydrostatically test the LNG tank and sendout pipelines. Furthermore, each ship unloading LNG at the terminal would take on between 11 and 14 million gallons of ballast water from the river. Given the facility could accommodate between 50 and 70 ships per year, the withdrawal of water for LNG ship ballast from the Taunton River could be between 550 and 980 million gallons per year during operation of the terminal. These withdrawals would be in addition to other existing or planned facilities in the area that currently withdraw or may withdraw much larger volumes of water. The cumulative impacts of these withdrawals are difficult to quantify given that the numbers of aquatic organisms entrained or impinged during water intake is a function of the intake structure's location, design, capacity and approach velocity, and the abundance of organisms of various species in the general vicinity at the time of the withdrawal. Historically, the estimated average annual loss of fish eggs and larvae due to water withdrawals of up to 1 billion gallons per day (or 365 billion gallons per year) at the Brayton Point Power Plant were about 251 million winter flounder, 11.8 billion bay anchovy, 375 million windowpane flounder, and 3.5 billion tautog (EPA, 2002a). Even though existing permits require the Brayton Point Power Plant to reduce the quantity of water withdrawn to 56 million gallons per day, both the volume and aquatic impact of the power plant water withdrawals will likely still far exceed the volumes and potential aquatic impacts of water withdrawals associated with other existing or planned facilities on Mount Hope Bay and the Taunton River. Additionally, effective mitigation for the smaller volume withdrawals may be easy to implement. For example, the impacts from proposed withdrawals of 5 to 10 million gallons of water per day at the new desalination facility in Dighton (Aquaria Project) would be minimized by covering the intake structures with exclusionary mesh and withdrawing water at relatively low velocities.

In conclusion, while construction and operation of the Weaver's Cove LNG Project could contribute cumulatively to impacts on aquatic resources, we believe these impacts would be relatively short-term and/or minor in comparison to those from non-point sources of pollution or from operation of facilities such as the Brayton Point Power Plant. Additionally, to reduce the potential for cumulative impacts associated with dredging and entrainment/impingement of aquatic organisms in the Taunton River, we have recommended in section 4.6.2 that Weaver's Cove Energy develop a specific plan for these activities in consultation with the appropriate resource agencies.

Vegetation and Wildlife

When projects are constructed at or near the same time, the combined construction activities would have a cumulative impact on vegetation and wildlife living in the immediate area. Right-of-way clearing and grading and other construction activities associated with the Weaver's Cove LNG Project along with other construction projects would result in the removal of vegetation, alteration of wildlife habitat, displacement of wildlife, and could have other secondary effects such as increased population stress, predation, and establishment of invasive plant species. The filling of salt marsh at the proposed terminal site and the removal of forest vegetation along the pipeline rights-of-way would have long-term impacts on vegetation and wildlife. These impacts would be greatest where other projects are constructed within the same time frame and areas as the proposed facilities (*e.g.*, residential development in forested areas along the Western Pipeline route). Additional vegetation clearing along existing rights-of-way (electric transmission, pipeline, or railroad) can have the additive effect of creating a cleared corridor of significant widths. Given the developed nature of the landscape, the collocation of the proposed pipeline

with existing utility rights-of-way allows for the consolidation of similar land uses. The collocation of the proposed pipelines with existing utility rights-of-way also reduces the total width by allowing overlap of construction workspace for the pipeline with the existing rights-of-way (see section 4.8.1.2). The collocation of the proposed pipelines with existing rights-of-way would be expected to minimize cumulative impacts on vegetation and wildlife.

As discussed above, it is possible that the development of both the Somerset LNG and Weaver's Cove Energy LNG projects could require an expansion of the existing Algonquin pipeline system. Although the specific nature of the improvements required by Algonquin to accommodate both projects is unknown, it is possible that additional pipeline looping may be necessary. The construction of additional pipeline could require widening of existing pipeline rights-of-way, resulting in both vegetation and wildlife impacts.

Infrastructure and Public Services

The cumulative impact of the Weaver's Cove LNG Project and other projects on infrastructure and public services would depend on the number of projects under construction at one time and the specific services required for each project. The small incremental demands of several projects occurring at the same time could become difficult for police, fire, and emergency service personnel to address. This problem would be temporary, and occur only for the length of construction. The operation of the proposed LNG terminal and associated facilities is not expected to have a major impact on public services since it would not result in the construction of new public roads, extensive new sewer or water systems, or significant changes in local population levels. There is however a concern that an incident at the LNG terminal could exceed the current response capacity of the Fall River fire and police departments. Weaver's Cove Energy would coordinate with local fire departments to develop an emergency response plan to be used in the event of an incident at the LNG terminal. In addition, Weaver's Cove Energy would have its own fire-fighting equipment at the facility. See section 4.12 for additional discussion of fire and public safety impacts and Weaver's Cove Energy's liaison program with the area emergency response departments. The details of this plan and specifics regarding the role of the police and fire departments in the event of an incident are not available at this time.

Vehicular Traffic

As discussed in section 4.9.4, the truck traffic that can be expected during operation at the LNG terminal would vary depending on the market demand of the LNG and the availability of trucks for transporting the LNG. Approximately 50 LNG truck trips and 70 employee vehicle trips are estimated per day during average operating conditions, which would be lower than the estimated historic traffic volumes at the site and represent only a small increase in the existing road traffic. Weaver's Cove Energy expects that the LNG trucks would use the New Street site entrance at the North Main Street/Route 79 entrance intersection. Employees and visitors would use an entrance located about 0.4 mile north on North Main Street, which would reduce the amount of traffic at the truck entrance intersection. The anticipated traffic volume resulting from operation of the LNG terminal, even when considered in terms of projected future traffic volumes and in relation to reasonably foreseeable future projects, would not significantly increase the existing traffic volumes on local area roadways (MDM Transportation Consultants, Inc., 2003). Construction of a higher bridge at Brightman Street should alleviate some local traffic congestion by reducing the frequency the bridge would be closed to vehicular traffic.

Traffic congestion along the proposed pipeline routes is not expected to be a major problem. However, there is potential for cumulative traffic impacts if other projects such as road improvements are scheduled to take place at the same time and in the same area as the proposed LNG and pipeline facilities. Currently, we are not aware of any planned road improvement projects that would cumulatively add to

construction traffic associated with the proposed project. Moreover, several factors would minimize the potential for cumulative traffic impacts, including the large area over which the proposed project is spread and the tendency for construction workers to frequently share rides and travel to and from work during off-peak hours. Additional measures proposed by Weaver's Cove Energy to minimize traffic impacts include scheduling to avoid commuter traffic and ensuring the availability of necessary traffic safety personnel. As such, potential cumulative impacts on traffic are expected to be temporary and short term.

Ship Traffic

Currently, commercial ship traffic entering Narragansett Bay averages two to three vessels per day. Although the information is somewhat variable depending on the source, it appears that commercial ship traffic in Narragansett Bay has been declining steadily over the past several years. Traffic in the Taunton River currently averages one vessel every two to three days and also appears to be declining. Based on information collected by the Coast Guard in 2002, there were about 112 vessel movements into the Fall River/Somerset area from Narragansett Bay. Of these vessels, 60 were coal deliveries to the Brayton Point or Montaup Power Plants, 11 were chemical carriers visiting the Borden and Remington Corporation facility in Fall River, and 18 were general cargo vessels berthed at the Fall River State Pier. Although it appears this service has been discontinued, there were 23 passenger vessel movements to and from the Fall River State Pier during 2002.

The Weaver's Cove LNG Project would result in one additional vessel entering the Federal navigation channel in the Taunton River every five to seven days (an additional 50 to 70 ships per year). Dredging the Federal navigational channel and the wider opening of the new Brightman Street Bridge could provide greater access to deeper draft and broader beam ships that move up the Taunton River as well as reduce some of the current sources of shipping delays. For example, some deep-draft ships may be able to move more freely within the Federal navigation channel without waiting for appropriate tidal conditions. As such, it is possible that the project could indirectly result in slightly fewer vessel transits to the Brayton Point or Montaup Power Plants by making it possible for fewer vessel trips to deliver the same amount of coal that was previously delivered (via larger or fully loaded ships).

One-way ship traffic and the security zones around LNG ships may constrain vessel movements within the Federal navigational channel temporarily during LNG ship transits (see section 4.12.5). However, even taking into consideration the shipping activity associated with the Weaver's Cove LNG Project, the Federal navigation channel in the Taunton River would remain under utilized. Existing and anticipated future traffic and traffic associated with the Weaver's Cove LNG Project would not result in traffic congestion upstream of the Brightman Street Bridge since no large commercial ships can proceed up the Taunton River beyond the LNG terminal site due to insufficient water depths. Any LNG ships accessing a potential LNG facility at Brayton Point would require additional coordination of ship movements in the northern portion of Mount Hope Bay. At this time, we anticipate that the total utilization of the Federal navigation channel would be approximately 170 to 250 commercial ships per year after the Weaver's Cove LNG Project is operational.

It is conceivable that the dredging of the Federal navigation channel could increase the number of large vessel movements in the Taunton River to levels higher than current projections. However, because we are not aware of specific proposals by other industrial or commercial operators, we do not view these activities as reasonably foreseeable and have not included additional ship traffic impacts in our analysis.

On April 30, 2004, Keyspan filed an application with the FERC seeking authorization to modify its existing Providence LNG storage and vaporization facility to allow import of LNG by ships (see section 3.2.1). If approved, about one LNG ship would unload its cargo at this facility every week beginning in late 2005. LNG ships accessing the Keyspan facility would transit up Narragansett Bay and

follow the East Passage to the entrance of the Federal navigation channel near Sandy Point on Prudence Island. Ships would then turn into Upper Narragansett Bay and follow the navigation channel to the Port of Providence. The portion of the ship route along the East Passage would be the same for LNG ships moving to or from either Providence or Fall River. LNG ships accessing the Keyspan and Weaver's Cove Energy facilities could cumulatively contribute to ship traffic delays in Narragansett Bay. Although the Coast Guard has not yet established specific security and safety plans for LNG ships, it is likely that a moving security/safety zone would be established that would restrict the distance other ships could approach an LNG ship. This would have the effect of temporarily limiting some shipping routes in Narragansett Bay to one-way traffic. This approach is currently used for LPG ships that unload in Providence. LPG ships can sometimes delay other vessels using the East Passage or Federal navigation channel as they wait or anchor at suitable locations to allow the LPG ship to pass. It is expected that inbound and outbound LNG ships moving to either Providence or Fall River could sometimes delay other ships in the area by 60 to 90 minutes. Additionally, LNG ships could temporarily disrupt local recreation boat or fishing traffic. Between the Weaver's Cove Energy and the Keyspan facilities, as many as 100 to 125 LNG ships could move in and out of Narragansett Bay every year. Additional discussion of present and future ship in Narragansett Bay is included in section 4.12.5.1.

Land Use

There are a variety of reasonably foreseeable residential, commercial, industrial, and transportation projects in the vicinity of the proposed LNG terminal and the pipeline routes (see table 4.13-1). Various agencies and organizations have made efforts to account for the cumulative impact of multiple development projects on land use by developing local and regional plans. These plans and the project's relationship to reasonably foreseeable projects are discussed in detail in sections 4.8.2 and 4.8.3. Although the Weaver's Cove LNG Project would affect existing land uses in the area, the project would be consistent with current land use plans and zoning ordinances. Consequently, the immediate cumulative land use effects of the project have already been considered. As discussed previously, it is conceivable that the development of multiple LNG projects in the region could result in a cumulative impact on the existing Algonquin pipeline system. Depending on the specific nature of an expansion by Algonquin, existing pipeline rights-of-way could be widened to accommodate additional pipeline (*e.g.*, looping).

Air Quality/Noise

Construction of the proposed project and some of the reasonably foreseeable projects and activities listed in table 4.3-1 would involve the use of heavy equipment that produces noise, air contaminants, and dust. Operation of the proposed LNG facility would also contribute cumulatively to air emissions and noise in the project area.

Over the long term, the proposed LNG terminal and pipeline facilities would not contribute significantly to current air pollution levels. Although the LNG terminal would emit NO_2, CO, SO_2, $PM_{10}/PM_{2.5}$, VOC, and Pb, the proposed terminal would not be a major source of air emissions under the PSD regulations for any of these pollutants (see section 4.11.1). NO_x and VOCs emissions from the Weaver's Cove LNG Project would contribute to regional ozone concentrations (the entire Commonwealth of Massachusetts is classified as a serious non-attainment area for ozone). However, these emissions would be small in comparison to the total NO_x and VOCs emitted by existing sources in the area (*e.g.*, Brayton Point or Montaup Power Plants, vehicle emissions). Because emissions associated with the project would be less than 50 tpy of NO_x and VOC, the LNG terminal would not be subject to NSR (see section 4.11.1).

Natural gas is a relatively clean and efficient form of energy compared to other fossil fuels. By burning natural gas rather than other fossil fuels such as coal or fuel oil, it could be possible to reduce the emissions of regulated pollutants (*e.g.*, NO_x, SO_2, and PM_{10}) or unregulated greenhouse gases (*e.g.*, CO_2). As such, it is possible that the Weaver's Cove LNG Project could cumulatively improve air quality in the region by providing a competitively priced source of natural gas that could replace the less efficient forms of energy that are currently being used (see section 3.1).

Additional noise produced during construction of the Weaver's Cove LNG Project and other projects could create short-term annoyances to nearby residences. These noise impacts would be localized and would attenuate quickly as the distance from the noise source increases. Therefore, cumulative noise impacts associated with construction would be unlikely unless one or more of the projects occur at the same time and in the same location.

As discussed previously, it is conceivable that the development of multiple LNG projects in the region could result in a cumulative impact on the existing Algonquin pipeline system. Depending on the specific nature of an expansion by Algonquin, additional compression could be added to the existing pipeline system that would include additional air quality or noise impacts.

Natural Gas Infrastructure

We received a comment suggesting that we analyze the cumulative effects of the Weaver's Cove LNG Project in relationship to other planned energy infrastructure projects in the region. Currently, we are aware of two other companies that are considering construction of LNG import terminals in the Narragansett Bay area - Somerset LNG and Keyspan. Whether or not these projects get built will depend on economics as well as regulatory approvals. Ultimately, the economic feasibility of these projects depends on the demand for LNG (and by extension natural gas). Based on a recent FERC study (FERC, 2003), it appears that by 2009 there will be demand during peak periods of use in New England for an additional 500 MMcfd of natural gas above what the current infrastructure is able to provide. None of the three proposed or potential LNG import projects could on its own deliver this volume of natural gas on a sustained basis (*i.e.*, the average sendout capacity of Somerset LNG, Keyspan, and the proposed project would be about 430 MMcfd, 200 MMcfd, and 400 MMcfd, respectively).

The need for additional modifications or improvements to the existing interstate pipeline system if two LNG import terminals are constructed depends on which facilities would be constructed. Our review indicates that the Weaver's Cove Energy and Keyspan facilities could both be constructed with minimal modification of the existing interstate pipeline infrastructure. If both facilities were constructed, the Keyspan facility could displace natural gas from interstate pipelines currently serving the Providence region while the Weaver's Cove Energy facility could be used as a new supply source throughout Algonquin's New England service area. If, however, both the Weaver's Cove Energy and Somerset LNG facilities were constructed, it seems likely that additional modification of the existing interstate pipeline system would be needed. This is because both Weaver's Cove Energy and Somerset LNG propose to interconnect and provide natural gas to the Algonquin pipeline system through Algonquin's G-22 lateral. It appears the Algonquin system has capacity to accommodate the volumes from any single project with only minor improvements, but may not accommodate the natural gas from multiple LNG import terminals without more significant expansions. Increasing the capacity of this system to accommodate multiple LNG terminals could involve increased compression and/or the installation of additional pipe.

It is possible that the construction of the Weaver's Cove Energy, Somerset LNG, and/or Keyspan LNG import terminals also could indirectly or cumulatively result in other potential environmental impacts (both positive and negative) outside of the Narragansett Bay area. The proposals to build new LNG import facilities in the region is in response to current and future demand for natural gas. By

providing new sources of competitively priced natural gas and LNG, these projects would help alleviate negative impacts on the economy and regional air quality that could potentially result from more limited access to these sources of energy (see sections 1.3 and 3.1). In addition to potential expansions of Algonquin's G-system as discussed above, construction of one or more LNG import terminals could result in other changes to the pipeline infrastructure in New England. In a recent study of natural gas infrastructure in the region, the FERC stated that the expansion of LNG deliveries to the area between New York City and Boston would free up capacity on the Algonquin and Tennessee pipelines, thereby providing additional access to natural gas stored in New York and Pennsylvania (FERC, 2003). It seems likely that accessing these storage areas would require some expansions or modifications of the Algonquin and Tennessee pipelines. Nevertheless, the construction of the Weaver's Cove Energy, Somerset LNG, and/or Keyspan LNG import terminals would reduce the overall need for new pipeline capacity in the region (FERC, 2003). This reduction in need for pipeline capacity would result in corresponding reductions in environmental impacts typically associated with pipeline expansions (*e.g.*, temporary or permanent impacts on water quality, wetlands, vegetation, land use, air quality, etc.).